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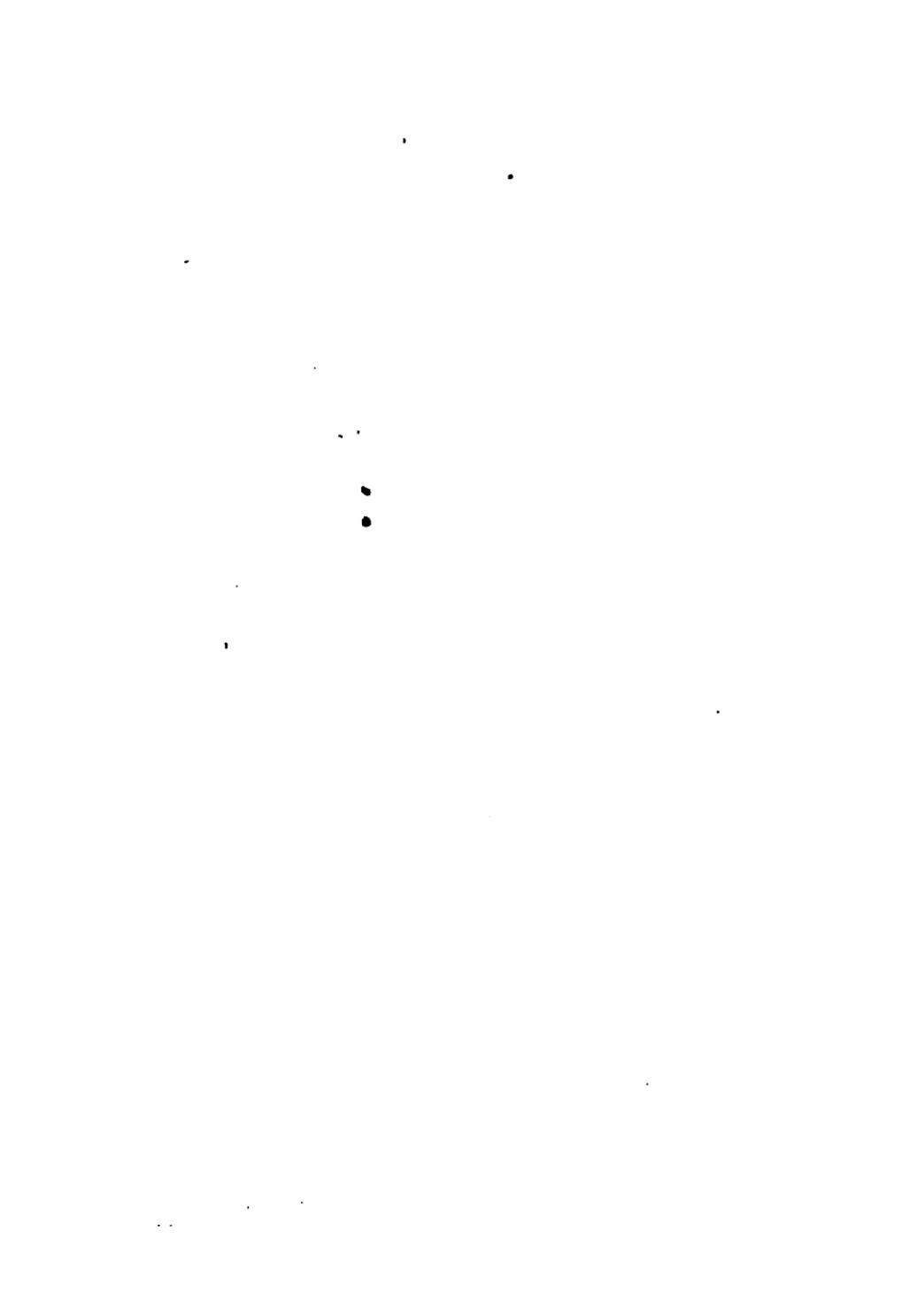


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LIVES  
OF  
SIR WILLIAM PHIPS,  
ISRAEL PUTNAM,  
LUCRETIA MARIA DAVIDSON,  
AND  
DAVID RITTENHOUSE.

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BOSTON:  
HILLIARD, GRAY, AND CO.  
LONDON:  
RICHARD JAMES KENNETT.  
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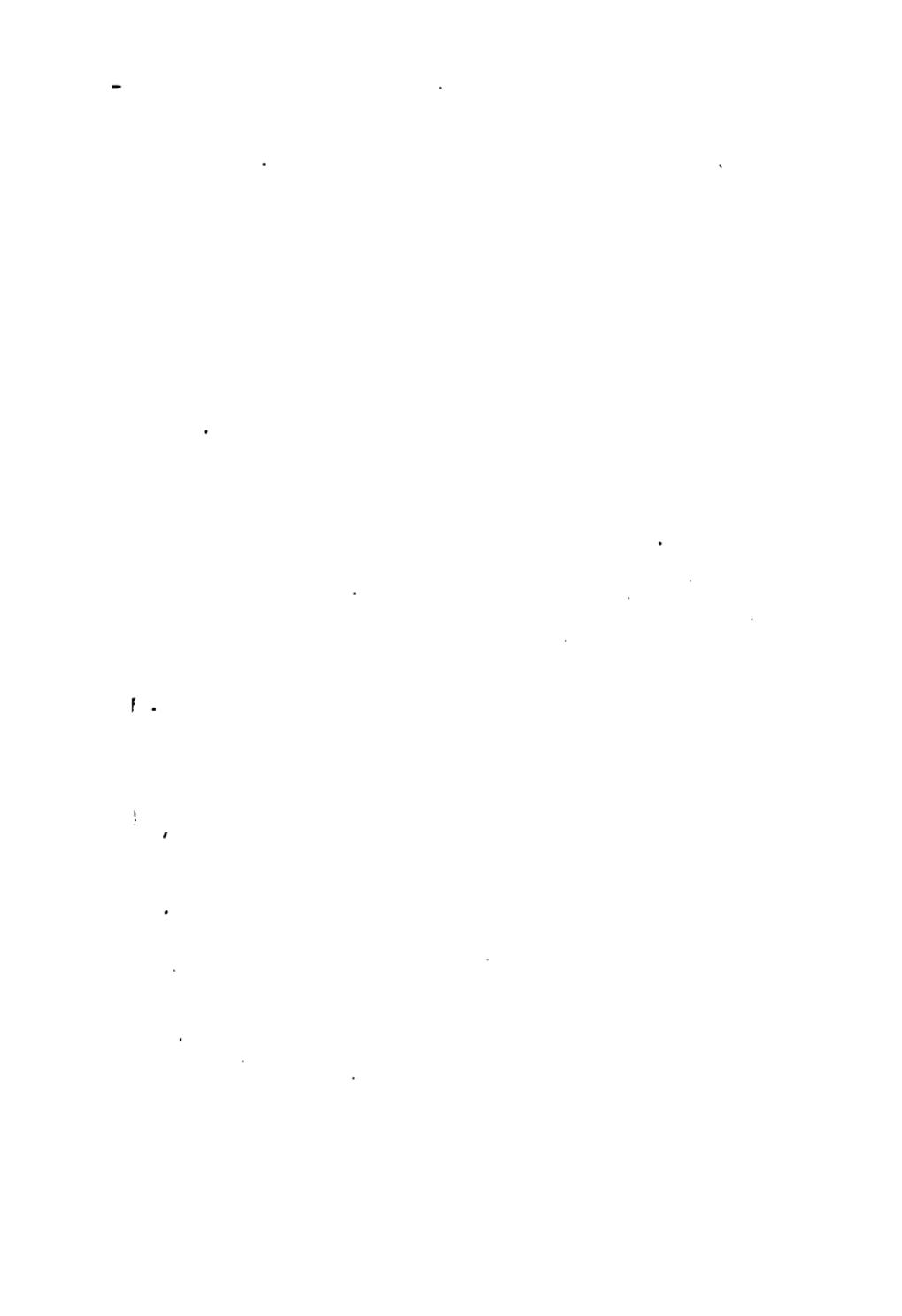
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LIFE  
OF  
SIR WILLIAM PHIPS;  
BY  
FRANCIS BOWEN.

VOL. VII.

1



## P R E F A C E .

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COTTON MATHER wrote a life of Sir William Phips, which was first published in London in a separate form, and was afterwards included in the "Magnalia." He was intimately acquainted with the subject of his memoir; and the account would be entitled to full credit, did not his well-known credulity, and the partiality which he everywhere shows, throw some doubt on the more remarkable statements. In the following biographical sketch, his authority has been followed only for the early part of Sir William's life, since the account of his public career is wholly unsatisfactory.

Careful research has been made in the offices of the Secretary of State of Massachusetts, and of the Massachusetts Historical Society; and, though nothing was found that related to the early life or personal character of Phips, some facts were brought to light respecting the two military expeditions which he commanded.

The particulars respecting the capture of Port Royal were drawn from documents, which, with

one exception, have not before been published. In the account of the expedition against Quebec, I have relied on the authority of Walley, the second in command of the troops engaged, whose official relation was published in the appendix to Hutchinson's "History of Massachusetts"; and on that of Major Savage, who commanded a portion of the army, and whose letter, containing a history of the expedition, may be found in the Collections of the Historical Society. Some statements were taken from the account given by Hontan, a French officer, who served under Frontenac in Quebec at the time of the assault. Hutchinson discredits the authority of this writer, but, as far as can be ascertained, without sufficient reason. He was an eye-witness of what he relates, and his narrative agrees in the main with the English accounts. In the history of the subsequent part of Sir William's life, I have followed Hutchinson.

## SIR WILLIAM PHIPS.

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### CHAPTER I.

*His Birth and Early Occupation. — Goes to Boston as a Ship-Carpenter. — His Marriage. — Visits England and obtains the Command of the Algier-Rose. — Unsuccessful Cruise. — Sent out again by the Duke of Albemarle. — Returns with a Spanish Treasure. — Receives the Honor of Knighthood.*

IT is often difficult for the historian to distinguish between rash adventure and well-concerted enterprise. Judging rather from success in the execution of a plan, than from the inventive genius and foresight displayed in its formation, mankind are apt to give to wild but fortunate daring the praise, which is due only to judgment, activity, and skill, even when unsuccessfully exerted. It has been well observed of Columbus, that, had he yielded to the entreaties of his crew but a few hours sooner than he had determined to do, his name, if it had survived at all, would have been remembered only as that of a half insane projector;

and the lives of many others, who have risen from obscurity and indigence to distinction and wealth, afford full proof, that the allotment of fame has been as arbitrary as the distribution of the other gifts of fortune. A mere accident has formed the turning point in the life of many an adventurer, and given him that success, which he had vainly sought in many better conceived endeavours.

The truth of these remarks is clearly shown in the life of one of the early governors of New England,—a man, who, in an age far less favorable than the present for the promotion of talent, sought his fortune in many schemes boldly planned and resolutely executed, and found it, at last, by fishing for ship-wrecked treasure among the rocks and shallows of the Spanish Main. But imperfect accounts of the early part of his career have been preserved; and these, from the strangeness of the incidents recorded, resemble rather the fragments of a nursery tale, than the materials of sober history. A narrative of his life may assist in doing justice to the character of the man, and throw perhaps some light on the features of the times in which he lived.

WILLIAM PHIPS was born February 2d, 1651, at Woolwich, Maine, a small settlement near the mouth of the river Kennebec. His father, James Phips, a gunsmith by trade, emigrated from Bristol, England, at an early period in the history of

the colonies, and fixed his residence on the very borders of the settlements. He had twenty-six children, all of one mother, of whom twenty-one were sons. Of these, William was one of the youngest, and, by the death of his father, he was left at an early age to the exclusive management of his mother. The lowness of his parents' situation, and the dangers and hardships incident to their residence in a half-reclaimed wilderness, surrounded and frequently harassed by the natives, did not admit of their bestowing much care upon the education of their children.

While yet very young, without being taught even to read, William was employed in tending sheep, and he continued in this occupation till he was eighteen years of age. But this business was too easy and uniform to satisfy a boy of a restless and adventurous disposition. The sea was to be his element, and a sailor's life of wandering, novelty, and hardship, was the only one which possessed any attractions for his active temperament.

Even at this early period, the colonists had engaged to some extent in navigation, to which, indeed, they were invited by the peculiarity of their situation, at so great a distance from the rest of the civilized world, and by the possession of the noblest harbors and navigable streams. The forests, which covered the banks of the rivers, offered facilities for ship-building, which were not allowed to

remain long unimproved. Unable to procure a situation on board a vessel, Phips apprenticed himself, as the next best resource, to a ship-carpenter, in whose employment, probably diversified by an occasional coasting trip, he remained for four years.

At the expiration of this time, his relatives would fain have persuaded him to settle among them; but, if we may credit his friend and biographer, Cotton Mather, some visions of future greatness had already visited his mind, and tempted him to seek, in a wider field of action, the fulfilment of his dreams. He would privately hint to his friends, that he was born for greater matters; and, as the best means of putting himself in the way of fortune, he removed, in 1673, to Boston. At this place, he worked at his trade about a year, and employed his leisure hours in learning to read and write. Here also he had the address or good fortune to recommend himself to the notice of a fair widow, and, by marrying her soon after, laid the foundation of his future success in life.

His wife was the widow of a merchant by the name of Hull, and the daughter of Captain Roger Spencer, a person who had once possessed considerable property, but had lost the greater portion of it by misplaced confidence. The wife of Phips had the advantage of him, both in years and fortune; and the world, which, in such cases, is apt to

suspect the existence of mercenary motives in one of the parties, was not, perhaps, in this particular instance, much mistaken in its conjecture.

The marriage, however, seems to have been a happy one. The lady was pleased with his person and address ; he did not dislike her fortune, and was not disposed to complain of her other qualifications ; and if he remained abroad during a considerable portion of the rest of his life, we may well consider the calls of his profession and a roving disposition as a sufficient reason for his wanderings, without supposing that there was any want of peace and comfort at home.

The addition to his pecuniary means enabled him to extend his business ; and he entered into a contract with some merchants of Boston to build them a vessel on Sheepscot river, at a place a little to the eastward of the mouth of the Kennebec. Having launched the ship, he engaged to procure a lading of lumber, and return to Boston. But unforeseen circumstances prevented the completion of this design.

The Eastern Indians, either from the imprudent conduct of the settlers, or the incitements of the French, had always looked with a jealous eye upon the English settlements in Maine. The frequent outbreak of hostilities was followed only by a hollow peace, sure to be broken whenever the natives had recovered their spirits after a defeat,

or found an opportunity for striking a cruel blow upon an unguarded village. Such an event occurred immediately after Phips had launched his vessel. The attack of the savages caused the immediate flight of the defenceless inhabitants, and they took refuge on board the ship, which was yet in the stream. Thus compelled to relinquish his purpose of obtaining a cargo of lumber, Phips immediately sailed away, and conveyed the distressed people, free of charge, to Boston.

The interruption of his plans by this incident caused considerable derangement in his affairs, and it is not unlikely, that for some time he felt the sharp pressure of pecuniary difficulties. But his sanguine temperament preserved him from despondency ; and it appears, indeed, that his dreams of future success were most frequent, when present embarrassments were at their height. We are told, that he would frequently console his wife with the assurance, that he should yet obtain the command of a King's ship, and become the owner "of a fair brick house in the *Green Lane* of North Boston." How much of the quaintness of these expectations is to be attributed to the man, and how much to the biographer, we cannot determine. He had ingenuity enough to form magnificent schemes, and, as his subsequent history proves, credulity sufficient to mistake his own sanguine anticipations for mysterious presentiments.

The realization of these golden hopes was postponed for a length of time, which, on a less sanguine mind, must have produced all the bitter effects of entire disappointment. Hardly any account is preserved of his history for the next ten years. They were probably spent mostly at Boston, in the industrious exercise of his profession as a ship-builder, and in short trading voyages, attended only with such success as was sufficient to preserve him from want, and diversified by the creation of projects, which perished either in the formation, or in the earliest stages of execution.

It was not till about the year 1684, that a prospect of obtaining wealth, if not distinction, was opened to him; and that came from a quarter, to which few men but himself would ever have dreamed of looking. We cannot tell how much judgment he manifested in embarking in such a scheme, without regarding the peculiar light in which such enterprises appeared to the men of his own times.

The sudden influx of wealth into Spain, during the sixteenth century, from her colonies in the West India Islands and South America, had a strange effect in heating the imaginations and exciting the cupidity of all the nations of Europe, who, at that time, had paid any attention to maritime affairs. This effect was increased by the peculiarly brilliant and tempting form, in which the wealth was

displayed. It consisted not so much in the increase of territory and in the extension of commerce, as in the actual importation of large quantities of bullion and coin. As the first in the field, the Spaniards enjoyed the entire command of these sources of affluence, and the subjects of other European powers could share the gains only by secret, contraband expeditions, or by open war and piracy.

The skill and daring of British seamen made them foremost in such attempts, and their success was sufficient to dazzle, though not enrich, the nation at large. The half piratical expeditions of Drake and Raleigh were only the most important in a series of such enterprises. Englishmen also had a large share in the wealth and guilt of the Buccaneers; and strange stories were current among the vulgar, concerning the wild adventures of men, who returned to their country after a long absence, and made the most ostentatious display of their riches. The ordinary means of gaining wealth appeared tame and insipid, compared with a daring enterprise for acquiring heaps of Spanish gold by the plunder of villages, or the capture of

"argosies with portly sail,  
The signiors and rich burghers of the flood."

At a comparatively late period, the reputation of persons even of high rank was affected by some of these proceedings. The connexion of the Earl of

Bellamont, and of Lords Rumney and Somers, with the voyage of the celebrated Kidd, has never been fully explained. For private individuals to make a mere commercial enterprise of a project, not to commit piracy, but to bring pirates to justice, to take shares in such an attempt, and agree upon a division of the profits, was, to say the least, a rather singular course. Indeed, the whole history of this daring pirate's career, of the objects for which he was despatched, and of the instructions which he received, is enveloped in mystery.

The success of the Spaniards at the South excited the most confident expectations among the English people of discovering mines of the precious metals also in the Northern part of the American continent. The mania of hunting for gold and silver gave rise to the scheme of the Virginia colony ; and subsequently, by diverting the attention of the colonists from agriculture and the other arts, by which alone an infant settlement could be maintained, the same cause nearly proved its ruin. Even when repeated disappointments had shown the futility of such expectations, individuals were found credulous enough, on the slightest encouragement, to renew the search for mines with the same eagerness, with which the attempt had formerly been prosecuted by the whole colony.

At the close of the seventeenth century, though the supply of precious metals from the Spanish

colonies had materially diminished, exaggerated stories were circulated, especially among seafaring men, of the immense wealth which was transported in galleons from the New to the Old World; and an occasional account of a wreck excited wild hopes of recovering the lost treasure, even from the bottom of the ocean.

A report of the wreck of a Spanish vessel, somewhere about the Bahamas, reached the ears of Phips, and induced him to make a voyage thither, in a small vessel, which he owned and commanded. He succeeded in finding the wreck, though the value of what was recovered from it, proved insufficient to defray the expense of the voyage. He was told, however, of another and more richly laden vessel, which had been wrecked near Port de la Plata, more than half a century before.

Unable from his own slender means to prosecute the search, he resolved upon a voyage to England, in the hope of inducing the government to fit out an expedition for the recovery of the treasure. He arrived in London in the year 1684, where he made such representations to the Admiralty, that, before the expiration of the year, he was appointed to the command of the Rose-Algier, a ship of eighteen guns and ninety-five men.

What circumstances favored his application, there are no means of ascertaining. He must have

had the assistance of influential friends ; otherwise, it is hardly probable, that a New England sea-captain, of little education and no property, and who held no office under the crown, could have obtained the command of a national vessel, for such a Quixotic purpose, as a search after the wreck of a vessel which had been lost some fifty years before. Nor is it easy to perceive how he found patrons in London, or how his friends at home could assist him, since New-Englandmen could hardly have been in favor at the court of James the Second. We can account for the extraordinary success of Phips, only by supposing that his project was approved by the King himself, who was fond of naval enterprise, and who was pleased with the direct application of a blunt and gallant sailor. Subsequent events render it not unlikely, that Phips enjoyed the personal favor of the monarch.

The commission which he received, must have imposed upon him some other duties than the mere search after ship-wrecked treasure ; for it was unlimited as to time, and was held by him during a two years' cruise in the West Indies, at the close of which period circumstances obliged him to return.

Unacquainted with the precise spot where the wreck was to be found, and unprovided with fit implements to prosecute the search, success in the

main object of the voyage could hardly have been expected. Great embarrassments were also experienced from the mutinous character of the crew. Sailors had been easily collected for a cruise, the express object of which was the acquirement of Spanish gold. But they were a motley and lawless set, unused to the restraints of a ship of war, and eager for an opportunity to realize the hopes, which had induced them to embark. Fatigued by severe duty, and weary of groping unsuccessfully for riches in the depths of the ocean, they at last openly demanded the relinquishment of their original purpose, and the use of the ship for a piratical expedition against the Spanish vessels and smaller settlements. But the courage and presence of mind of their commander enabled him to avoid the danger.

On one occasion, breaking out into open mutiny, the crew came armed to the quarter-deck, that they might compel the adoption of their measures. Though unarmed and taken by surprise, Phips contrived to secure two or three of the ringleaders, and to awe the rest into submission.

But a more dangerous and better concerted plot was soon afterwards formed. The ship had been brought to anchor at a small and uninhabited island, for the purpose of undergoing some repairs. To admit of careening the vessel, a great part of the stores were removed, and placed under cover

in an encampment on the shore. The ship was then hove down by the side of a rock stretching out from the land, to which a small bridge was constructed, that afforded the means of passing to and fro.

Under the pretext of amusing themselves, the greater part of the crew retired to the woods at a short distance from the encampment, and there entered into an agreement to stand by each other in an attempt to seize the captain, and make off with the vessel. The plan was to return about seven o'clock that evening, to overpower Phips and the seven or eight men who were with him, and leave them to perish on the barren key, while the mutineers, who were about a hundred in number, were to make a piratical expedition to the South Sea. A mere chance discovered and defeated the conspiracy.

It occurred to the party that, in their contemplated voyage, they would need the services of the carpenter, who was still on board the vessel. Sending for him on some pretence, they acquainted him with their plan, and threatened him with instant death, if he did not join in its execution. He prevailed upon them, however, to grant him half an hour's delay to consider of the matter, and to permit him to return to the ship for the purpose of procuring his tools. Two or three of the seamen attended him to watch his motions. A few

minutes after he came on board, he pretended to be suddenly taken sick, and ran down, as if for some medicine, to the cabin, where he found the captain, and in a few words informed him of the danger. Phips immediately told him to return to the shore with the others, to appear to enter fully into their plan, and leave the rest with him.

No time was now to be lost, for it wanted but two hours of the moment fixed for the execution of the conspiracy. Calling round him the few that remained in the vessel, and finding them warm in their professions of fidelity, he commenced his preparations for defeating the project of the disaffected. A few of the ship's guns had been removed with the stores to the land, and planted in such a manner as to defend the tent. He caused the charges to be drawn from these, the guns themselves to be turned, and all the ammunition to be removed to the frigate. The bridge was then taken up, and the ship's guns loaded and trained, so as to command all approaches to the encampment. The mutineers soon made their appearance from the woods, but were hailed by Phips, who threatened to fire upon them if they came near the stores. The bridge was then again laid, and the few faithful hands set about transporting the articles from the land to the vessel. The others were obliged to remain at a distance, being told that they were to suffer the fate which they

had intended for the captain, and be abandoned to perish upon the island.

The prospect of such an end, and the impossibility of making any resistance, soon brought the crew to terms. They threw down their arms, protested that they had no cause for disaffection, but the refusal of the captain to accede to their piratical scheme ; this they were now willing to abandon, and begged for permission to return to their duty. This request at length was granted, though suitable precautions were taken, by depriving them of their arms and keeping a strict watch while they remained in the vessel.

With such a crew, it was dangerous to spend any more time in the prosecution of the original design, and Phips accordingly weighed anchor and sailed to Jamaica. Here he discharged the greater part of the men, and shipped a small number of such other seamen as he found in port.

The search had thus far proved unsuccessful, from his imperfect knowledge of the circumstances under which the vessel was lost. With the view of obtaining further information, he sailed for Hispaniola, where he met with an old Spaniard, who pointed out to him the precise reef of rocks, a few leagues to the north of Port de la Plata, where the ship had been wrecked. Phips immediately proceeded to the spot, and examined it for some time, but still without success. Before he could satisfy

himself that the place was sufficiently explored, the condition of the Rose-Alger, which was out of repair and not more than half manned, obliged him to relinquish the attempt for the time, and return to England.

By the Admiralty he was received with greater favor, than, considering the ill success of his scheme, he could reasonably have expected. The energy which he had displayed, in executing the secondary objects of the voyage, and in defeating the mutinous designs of the crew, relieved him from any imputation of unskilfulness as a naval officer, though the government would not again intrust him with the command of a national vessel. Undismayed by failure, Phips renewed his solicitations for further aid, alleging the necessarily imperfect examination of the reef, on which there was every reason to hope that the wreck might be found. But the experiment already made was considered as having demonstrated the impracticability of the plan, and the application was unsuccessful.

Finding there was no hope of obtaining a ship of war, he endeavored to interest private individuals in the undertaking, and at last induced the Duke of Albemarle, in connexion with a few other gentlemen, to fit out a vessel and to give him the command. A patent was obtained from the King, giving to the associates an exclusive right to all

the wrecks that might be discovered for a number of years to come. A tender was provided for making short excursions in waters where they might not venture the ship; and, as the former failures were in great part attributed to the want of proper means of making submarine researches, some time was employed in constructing implements, which Phips contrived and partly executed with his own hands. No account is given of these contrivances; they consisted of nothing more, probably, than a few rough drags and hooks.

Having equipped his vessel, he sailed for Port de la Plata, where he arrived without accident. Here the first object was to build a stout boat, capable of carrying eight or ten oars, in making which Phips used the adze himself, in company with the crew. A number of the men, with some Indian divers, were then despatched in the tender, while the captain remained with the ship in port. Having anchored the tender at a convenient distance, the men proceeded in the boat to examine the rocks, which they were able to do with ease, from the calmness of the sea.

The reef was of a singular form, rising nearly to the surface, but the sides fell off so precipitously, that any ship striking upon them must, as it seemed, have bounded off and sunk in deep water. Hoping to find the wreck lodged on some projecting shelf, they rowed round the reef several times,

and sent down the divers at different places. The water was clear, and the men hung over the sides of the boat, and strained their eyes in gazing downwards to discover, if possible, some fragment of the ship. All was in vain, and they prepared to return to the tender. But just as they were leaving the reef, one of the men, perceiving some curious sea-plant growing in a crevice of the rocks, sent down one of the Indians to obtain it. When the diver returned, he told them that he had discovered a number of ship's guns lying in the same spot. Other divers were immediately sent down, and one soon brought up a large ingot of silver, worth from two to three hundred pounds sterling. Overjoyed at their success, they marked the spot with a buoy, and then returned with the boat and tender to the port.

Phips could not believe the story of their success, till they showed him the ingot, when he exclaimed, "Thanks be to God, we are all made." The whole crew were immediately set to work, and, in the course of a few days, they fished up treasure to the amount of three hundred thousand pounds. They had lighted, at first, on the part of the wreck where the bullion was stored, but they afterwards found the coin, which had been placed in bags among the ballast. It had remained there so long, that the bags were found covered with a calcareous incrustation of considerable thick-

ness, which being broken open with irons, the pieces of eight showered out in great profusion. Besides the gold and silver, precious stones were found of considerable value.

In the course of the search, they were joined by one Adderley, a ship-master of Providence, who had been of some assistance to Phips in the former voyage, and who now met him by appointment in a small vessel. With his few hands, he contrived, in a day or two, to load his vessel with silver to the amount of several thousand pounds. This success fairly upset the reason of the poor Providence sea-captain, and, a year or two afterwards, he died in a state of insanity at Bermuda.

The failure of provisions obliged the party to think of departure, before the examination of the wreck was complete; the last day that the men were at work, they raised about twenty heavy lumps of silver. With the view of revisiting the spot and completing the work, an oath of secrecy was imposed upon Adderley and his men, and a promise exacted, that they would content themselves with what they had already acquired. But through the imprudence of these persons, the secret leaked out, the Bermudans visited the wreck, and when Phips returned, after the lapse of a year or two, it was found that every article of value had been removed.

Besides the want of provisions, other considera-

tions induced the captain to hasten his departure. The crew, though not so mutinously disposed as those who formerly manned the Rose-Alger, were by no means trustworthy; and the knowledge of such a vast treasure, yet contained in the ship, and which had been acquired by their own exertions, was enough to excite the cupidity of the men, and to induce them to attempt the seizure of the vessel. Every precaution was taken, by keeping a strict watch and promising the men, that, in addition to the stipulated wages, they should receive a portion of the profits, even if Phips should thereby be obliged to sacrifice his own share. Not daring to stop at any nearer port to obtain the necessary supplies, he sailed directly for England, where he arrived safe with his lading, in the course of the year 1687.

After making a division of the profits, and paying the promised gratuity to the seamen, there remained to Phips only about sixteen thousand pounds, though, as a token of satisfaction with his conduct, the Duke of Albemarle presented his wife with a gold cup of the value of a thousand pounds. The King was advised to seize the whole cargo, instead of the tenth part, which had been reserved by the patent, on the pretence, that the grant had been obtained only by the suppression of some information possessed by the parties. But King James refused to take such an ungenerous course.

He avowed his entire satisfaction with the conduct of the enterprise, and declared, that Phips had displayed so much integrity and talent, that he should not henceforth want countenance. In consideration of the service done by him in bringing such a treasure into the country, and as an earnest of future favors, he received the honor of knighthood, and was requested to remain in England, with the promise of honorable employment in the public service.

But his home was still New England; and though he had never received much encouragement there, but, on the contrary, supposed he had good reason to complain of some of his countrymen, still, as the colony was now in a distressed state, and he was able to afford some aid, he was too patriotic to absent himself for ever from his native land. For the remainder of his life, his history is closely connected with that of the colonies.

## CHAPTER II.

*State of Affairs in New England.—Phips returns thither as High Sheriff.—Goes to England again.—Deposition of Andros at Boston.—Phips returns.—French and Indian War.—Successful Expedition against Acadia.—Particulars respecting the Plunder taken at Port Royal.*

IN 1687, the affairs of New England were in a most perturbed condition. The taking away of the charter of Massachusetts, in the previous year, had been followed by the appointment, as governor, of Sir Edmund Andros, a man well qualified, by his imperious temper and grasping disposition, to execute the arbitrary designs of the English court. The loss of the charter was held to involve the forfeiture of the rights and privileges formerly enjoyed by the colonists, and to have subjected them entirely to the discretionary government of the crown.

No house of assembly was in future to be convened, and the governor, with any four of the council, was empowered to make laws, and to levy such sums upon the people as were sufficient to meet the wants of the government, or to satisfy

the cupidity of himself and his adherents. It was no small aggravation of the loss of their privileges, that Edward Randolph, the old and constant enemy of the colonists, whose repeated complaints had supplied a pretext for the forfeiture of the charter, had been appointed one of the governor's council; and it was understood, that Andros relied chiefly upon his advice in the management of affairs.

The former magistrates were removed from office, the freedom of the press was abridged by the appointment of a licenser, a tax of a penny on the pound was levied on all estates, exorbitant sums were exacted for fees; and, to crown the whole, the people were informed, that the titles to their estates were made void by the loss of the charter, under which they were granted, and could only be renewed by the payment of large fines. Some discretion was used, it is true, in the exercise of the power, which this declaration threw into the hands of the council, since its direct enforcement could only have ruined the colony. Notices were served from time to time upon the owners of large estates, requiring them to show cause, why the titles to their lands should not be vested in the crown; and, to avoid a trial before packed and subservient juries, the proprietors were glad to compound with the payment of a fourth or fifth part of the value of their property.

Such things were not endured without murmurs, and an attempt at redress. The people were generally peaceable, though a few persons were arrested and held to trial, on the significant charge of using disrespectful and rebellious language against his Majesty's government. Representations from private sources were made in England; but they were urged with little stress, from the want of an agent in London. At last Increase Mather, then president of Harvard College, was induced to undertake a voyage to England, to plead the cause of the colony in person. The governor and his agents used all their efforts to prevent the voyage, and a sham prosecution was got up by Randolph, that Mather might be arrested on the eve of embarking. But some of his parishioners carried him on board in the night, and in May, 1688, he arrived in England, where he found a zealous coöoperator in Phips, who was still lingering about the court.

What little countenance Mather received from James the Second, is undoubtedly to be ascribed to the influence of Sir William, who now enjoyed considerable reputation at court, and some personal favor with the King. This assistance was not forgotten at a later period, when, from a change in their respective situations, Mather had an opportunity of repaying, with interest, the favors which he had received.

A petition was presented, praying "that the rights, which the people had to their freeholds, might be confirmed; and that no laws might be made, or moneys raised, without an assembly." This petition was referred to the Committee on Foreign Plantations; but the King absolutely refused to consider the article respecting the levying of taxes by act of assembly, and the committee would not propose it. On another occasion, upon an intimation that any request from him would be favorably received, Phips applied directly for a restoration of privileges to the colony; but the King replied, "Any thing but that, Sir William." Indeed, the successful war, which James had waged with the chartered rights of the English corporations, left hardly a ground of hope, that he would respect the privileges of the colonies, when a decree of the Court of Chancery had placed them entirely in his power.

Unable to succeed in his primary object, Sir William began to think of some other way, in which he might be useful to his country. A lucrative office under the Commissioners of the Navy was offered to him; but his domestic and patriotic feelings still pointed homeward, and he determined, probably with the advice of Mather, to apply for the office of sheriff of New England. The power, which such an appointment would give him, over the selection of jurors, would enable him to

aid such of his countrymen as were obliged to defend, in a court of law, the titles to their estates.

By an application to the King, backed by a considerable expenditure of money, he succeeded in obtaining the office; and, with his commission in his pocket, he sailed in the summer of 1688, in company with Sir John Narborough, for New England. On his way thither, he visited the place where he had discovered the wreck; but, from reasons already mentioned, found nothing to repay the cost of another search.

On his arrival at Boston, he soon ascertained, that his patent as sheriff would not secure him the possession of the office, or enable him to oppose effectually the measures of Andros and his party. He gratified, however, his wife's ambition and his own, by building "the fair brick house in Green Lane," which he had promised her five years before, when his only fortune consisted in a sanguine and active temperament and an enterprising disposition. The name of Green Lane was subsequently changed, in compliment to him, to Charter Street. The house stood at the corner of this street and Salem Street. It was afterwards used as the "Asylum for Boys," and remained standing till within a few years, when it was pulled down to make room for modern improvements.

Sir William's ignorance of the forms of law, arising from his imperfect education, prevented his

prosecuting successfully a claim to office, which, in the hands of another, might have produced important results. I find, on some documents of a later period, his signature, made with the awkward strokes and imperfectly formed letters of a child just learning to write. But his roving and adventurous life had given him that knowledge of mankind, and confidence in his own powers, which so frequently supply the loss of early opportunities. Without such qualities, he could hardly have sought and obtained, within the compass of a few years, the captaincy of a man-of-war and the office of high sheriff, and finally of governor of New England.

Not only were all his attempts to exercise the office of sheriff frustrated by the artifices and delays of the council, but, if we may credit Cotton Mather's account, an attempt was made by some creatures of the governor to assassinate him before his own door. But the story is not a probable one. Very likely it arose from some scuffle, in which the hasty disposition and sailor-like habits of Phips may have involved him. The policy of Andros seems to have been pacific enough, at least as far as actual outrage to the persons of individuals was concerned; and the advantage to be gained by removing a troublesome claimant for office was hardly sufficient to counterbalance the risk. His failure at home induced Sir William to make an-

other voyage to England, where he arrived at the commencement of the year 1689.

The revolution had taken place, and he found his old patron in exile, and William and Mary on the throne. With the view, probably, of retaining the same interest in the American colonies, which he yet possessed in Ireland, the exiled monarch, through one of his adherents in London, offered Phips the government of New England. But Sir William showed both his good sense and patriotism by refusing it. With his knowledge of the disposition of the colonists, he must have foreseen the events, which actually occurred in Boston when they heard of the expedition of the Prince of Orange, and which would have made void his commission, before he could arrive to execute it. By remaining in London, and uniting his efforts to those of Mather and the other agents for the recovery of the charter, he had a fairer prospect of doing service to the colony, and ultimately obtaining some employment for himself.

News soon arrived from Massachusetts, which changed the grounds of application, and facilitated the exertions of the agents. Notwithstanding the efforts of Andros and his party, the colonists received early notice of the change in the English government.

A copy of the Prince of Orange's declaration was first obtained by way of Virginia; and, though

the governor imprisoned the man who brought it, the people were apprized of the facts, and not a little agitation ensued. The more considerate among them were in favor of postponing any active measures, till they could hear of the settlement of affairs in the mother country. But the inhabitants of Boston could not be restrained. Rumors were circulated of the intention of the governor to suppress, by violent means, any symptoms of disturbance, and that the armament of the Rose frigate, which was then lying in the harbor, would be used for that purpose. Nearly all business ceased, the inhabitants collected in groups, and the governor, becoming alarmed at the threatening aspect of affairs, sheltered himself and a few of the council within the walls of the fort.

On the 18th of April, the explosion took place. The drums beat and the inhabitants collected together, probably without any concert among themselves. Companies of soldiers were organized, the officers of the frigate, who happened to be on shore, were seized, and a summons was sent to Andros, demanding the surrender of the fort. Unable to offer any effectual resistance, he submitted; and, before nightfall, the frigate was secured, a provisional government formed, and the inhabitants, having gained their object without shedding a drop of blood, quietly dispersed. Bradstreet, the former governor under the old

charter, and the other magistrates, were soon persuaded to return to office.

A report of these proceedings, transmitted through the colony agents to the King, was favorably received, and a commission was issued, empowering the government to act under the provisions of the old charter, till the principles, on which colonial affairs were in future to be administered, could be definitively settled. Thus, instead of applying for a redress of present grievances, the agents had only to solicit a confirmation of existing privileges; and this gave them greater hopes of ultimate success. But the necessity of awaiting the action of Parliament, and the delays which were, intentionally perhaps, caused by King William, proved wearisome to Phips, who also felt the loss of that personal influence with the king which he formerly enjoyed. The condition of the colony, also, was now such, that he had a prospect of active employment at home, and he accordingly resolved on an immediate return.

He arrived in the summer of 1689, when an Indian war was raging on the frontiers. It had broken out the previous year, and had been aggravated by the inefficient prosecution of it by the former government. Though entirely unacquainted with military affairs, the hope of being engaged in the management of this war had induced Sir William to return, and he soon made an offer of his services to Governor Bradstreet.

In the mean time, he contracted an intimacy with Cotton Mather, whose advice seems to have had much influence over him during the remainder of his life. By attendance on the spiritual instructions of Mather, he was induced to make a public profession of his religious faith, and on the 23d of March, 1690, he became a member of the North Church in Boston. Previously, however, he was obliged to receive the rite of baptism ; and, on occasion of this ceremony being performed, he handed to the clergyman a paper, which was afterwards published. A portion of it is here inserted, not only on account of the confirmation which it gives of the history of his early life, but as the only authentic production of his own pen, which I have been able to find. Some suspicion would rest upon the authenticity even of this piece, did not Cotton Mather declare, that the original was in Sir William's own handwriting, and that he had not altered a word in copying it.

“The first of God’s making me sensible of my sins was in the year 1674, by hearing your father preach concerning ‘*The day of trouble near.*’ I did then begin to think what I should do to be saved, and did bewail my youthful days, which I had spent in vain ; I did think that I would begin to mind the things of God. Being then some time under your father’s ministry, much troubled with my burden, but thinking on the scripture, ‘*Come*

*unto me, you that are weary and heavy laden, and I will give you rest,'* I had some thoughts of drawing as near to the communion of the Lord Jesus as I could. But the ruins which the Indian wars brought on my affairs, and the entanglements which my following the sea laid upon me, hindered my pursuing the welfare of my own soul as I ought to have done.

"At length, God was pleased to smile upon my outward concerns. The various providences, both merciful and afflictive, which attended me in my travels, were sanctified unto me, to make me acknowledge God in all my ways. I have diverse times been in danger of my life, and I have been brought to see, that I owe my life to Him that has given a life so often to me. I have had great offers made me in England, but the churches of New England were those which my heart was most set upon. I knew, that if God had a people anywhere, it was here; and I resolved to rise and fall with them. My being born in a part of the country, where I had not in my infancy enjoyed the first sacrament of the New Testament, has been something of a stumblingblock unto me. That I may make sure of better things, I now offer myself unto the communion of this church of the Lord Jesus."

The circumstances in which Sir William was now placed, the possession of family and friends,

of considerable reputation, and of a competent fortune, would have disposed most other men to quiet enjoyment and a life of ease. But he had acquired his fortune by adventure, and he could not enjoy it in domestic privacy. In conversation with Mather, he frequently expressed his feelings on this point.

"I have no need," he would say, "to look after any further advantages for myself in this world ; I may sit still at home, if I will, and enjoy my ease for the rest of my life ; but I believe that I should offend God in doing so ; for I am now in the prime of my age and strength, and, I thank God, I can endure hardship. He only knows how long I have to live ; but I think 't is my duty to venture my life in doing good, before a useless old age comes upon me. Wherefore I will now expose myself where I am able, and as far as I am able, for the service of my country ; I was born for others, as well as for myself."

There is good sense and good feeling in these remarks ; and, if they do not prove that his sole object in his future active life was to benefit his countrymen, they show, at least, that he was able to appreciate honorable motives, and prepared to make considerable sacrifices, when duty called. The exigencies of the war soon opened a fair field for honorable exertion.

The hostilities with the natives, besides the terror

excited by the common barbarities of such a war, had now become more alarming from the fact, that the French coöperated with the Indians, supplied them with arms, and instigated them to more extensive operations. The successful labors of the Roman Catholic priests had given them great power over the savages, a power which they did not hesitate to turn to political purposes, and which frustrated all attempts of the English to divert the chiefs from their alliance with the French, and to induce them to form a separate peace.

The winter of 1690 was signalized by the capture of Schenectady in New York, and Salmon Falls in New Hampshire, the destruction of which places was accompanied by circumstances even of unusual atrocity; while the capture of Fort Pemaquid, in Maine, rendered the situation of the settlements in that quarter extremely dangerous.

Since the kind of partisan warfare, which had heretofore been practised against the savages, proved insufficient against the combined efforts of the French and Indians, the colonists were induced to attempt the capture of the places whence the enemy obtained their supplies. Port Royal, the capital of the French province of Acadia, was conveniently situated for carrying on intercourse with the Eastern Indians, and for affording a shelter to the privateers, which annoyed the English shipping, and, occasionally, the smaller settlements on the coast.

The province had been in possession of the French more than thirty years ; a small fort had been erected for the security of Port Royal ; and from the advantageous situation of the place for carrying on a trade in lumber and fish, the population of that and the other settlements had increased to six or seven thousand. But so little apprehension was felt of the ability of the English to conduct against it an enterprise by sea, that a force only of sixty men was maintained in the fort.

In fact, the resources of the English had been so much exhausted in the unsuccessful prosecution of the war by Andros, that it was deemed impracticable to make any attempt upon the place at the public charge. It was thought, however, that the prospect of obtaining considerable plunder, and the advantages that would accrue from an exclusive privilege of trading from the place after it was captured, would induce private individuals to undertake the enterprise ; and as early as the 4th of January, 1690, the following order was passed by the General Court. "For the encouragement of such gentlemen and merchants of this colony as shall undertake to reduce Penobscot, St. John's, and Port Royal, it is ordered, that they shall have two sloops of war for three or four months at free cost, and all the profits which they can make from our French enemies, and the trade of the places which they may take, till there be other orders

given from their Majesties." This was an extension of the privateering system to the land service, which it would be hard to reconcile with the principles of nice morality. But the exigencies of the case, and the peculiar nature of a French and Indian war required, if they did not justify, such a course.

This offer engaged the attention of Sir William Phips, and finally induced him to embark in the enterprise himself, and to use all his exertions to persuade others to follow his example. In this he was unsuccessful. Such a commercial speculation was of too novel and daring a character, to suit merchants less fond of adventure than himself. But the annoyance caused by the enemy, soon proved so serious, that it was resolved to make the attempt "at the public charge and with all speed." A committee was raised, and every means used to induce troops to volunteer for the service; but with no great success.

On the 22d of March, the General Court resolved that, "if, upon the encouragement given, men do not offer themselves voluntarily for the expedition against Nova Scotia and L'Acadie, the committee be empowered to impress men, as many as may be necessary, not exceeding five hundred. And, the Honorable Sir William Phips having offered himself to that service, he is desired to take the chief command of all the forces that shall be raised for

that expedition, and of the shipping and seamen employed therein." Authority was also given to impress merchant vessels for the transportation of the troops, and a sufficient number of seamen. By these means, a small fleet was prepared at Nantasket, of seven or eight vessels, having on board about seven hundred men.

Sir William's instructions were made out, signed by Governor Bradstreet, and delivered to him on the 18th of April. He was ordered "to take care that the worship of God be maintained and duly observed on board all the vessels ; to offer the enemy fair terms upon summons, which if they obey, the said terms are to be duly observed ; if not, you are to gain the best advantage you may, to assault, kill, and utterly extirpate the common enemy, and to burn and demolish their fortifications and shipping ; having reduced that place, to proceed along the coast, for the reducing of the other places and plantations in the possession of the French into the obedience of the crown of England ; to consult and advise with Captain William Johnson, Mr. Joshua Moody, Captain John Alden, and the other captains of the several companies, who are hereby constituted and appointed to be of your council."

Furnished with these instructions, Phips sailed from Nantasket on the 28th of April, and arrived at Port Royal on the 11th of May. The French

governor, M. de Meneval, was taken completely by surprise, and the condition of the town, which was situated upon the water's edge, exposed to the fire of the ships, and fortified only by a single palisade, together with the smallness of the garrison, precluded the idea of offering any effectual resistance. But the place held out till the troops landed, and an assault took place, when the governor agreed to surrender, on condition, as he afterwards asserted, that private property should be respected, and that the prisoners should be transported to some French port. If such promises were given, in one important particular they were certainly disregarded.

Sir William took possession in the name of the English government, demolished the fort, and administered the oath of allegiance to those of the French inhabitants, who chose to remain. He then appointed a governor of the town with a small garrison, and set sail on his return, carrying with him all the public property that could be found, and a considerable quantity of private effects. On his way home, he landed at the various settlements, and took formal possession of the sea-coast from Port Royal to Penobscot. The whole province of Acadia was thus subdued, and remained in possession of the English till the peace of Ryswick, in 1697, when it was restored to the French.

During the absence of Phips, the Indians and Canadians had carried on the war with much success in Maine. In the early part of May, the fort at Casco was surprised, and more than a hundred men taken prisoners. This was the strongest post in that quarter, and its loss compelled the weaker garrisons along the coast to fall back upon Saco, and ultimately upon Wells, leaving the whole Eastern country, either in actual possession of the enemy, or entirely defenceless. When the news of these events arrived at Boston, much alarm was excited. A small vessel was hastily prepared, and despatched with a letter from Governor Bradstreet to Sir William, ordering him to make a descent on Casco, annoy the enemy, and endeavour to rescue the captives.

The vessel, which carried this letter, unfortunately missed the fleet from Port Royal, which arrived at Boston on the 30th of May, when it was too late to make any attempt upon Casco. On his arrival, Sir William took his seat at the Board of Assistants, to which he had been elected two days before.

Immediately after the return of the shipping, an order was passed, appointing a committee to take charge of the property brought from Port Royal, to sell the same, and, from the proceeds, to defray the expenses of the expedition; should there be any surplus, to divide the same into two equal

parts,—one moiety to be reserved for the use of the colony, and the other to be applied to the benefit of the officers and soldiers, who had been engaged in the service.

The invoice, which was taken of the plunder, is still preserved among the papers in the office of the Secretary of State in Massachusetts, and a curious document it is. Many of the articles enumerated were undoubtedly public property, and, as such, subject to the chances of war. Others were evidently taken from private houses, and by the modern rules of warfare, whether the town surrendered on capitulation or not, ought to have remained untouched.

Among the articles enumerated, were seven hundred and forty pounds in gold and silver; twenty-one pieces of artillery, mostly four-pounders; fifty casks of brandy, twelve of claret wine; and a large quantity of flour. The miscellaneous articles were hastily packed in hogsheads; and the exact inventory, which was made of the contents of each cask, is equally amusing from the nature of the articles, and from the entire want of assortment in the packing. A brief specimen will suffice. “Twenty-four girdles; two caps; one hood; twenty-four canonical gowns; four more gowns with silver clasps and laced; beds and bedding; one white coat; two pair of shoes; one red waistcoat; fourteen old kettles, pots, and stew-

pans." The doughty band seem to have plundered even the kitchens.

The total proceeds were probably sufficient to pay all the cost of the armament, and to leave a considerable surplus.

Some unsuccessful attempts were made to recover a portion of the property thus unjustly appropriated. After De Meneval had remained a prisoner of war in Boston nearly seven months, the following paper was transmitted by him to the Council.

"Seeing that Mr. Phips, and Madam his wife, have circulated a report, that every thing that was taken from me at Port Royal has been restored to me, I have thought it necessary to show the contrary to the Governor and the Gentlemen of his Council, that they may have the goodness to have justice done me, as regards my fair rights, such as I demand them, according to the present memoir; upon which, I pray them to let me be heard before them, by the means of a good and faithful interpreter; offering to prove by his writing, and by good English witnesses, that he made a capitulation with me, which it is just should be observed; in default of which, I protest for all damages and interest against him; who has done, or caused to be done, all the wrongs mentioned here below, which he is obliged to repair in strict justice, and according to the rules of war and reason."

A list is then given of articles taken from De Meneval himself, the most important item of which is the following ; " four hundred and four pistoles, the balance of five hundred and four, which I confidently put into his hands." Fifty other articles are enumerated, mostly of silver plate, furniture, and wearing apparel. The paper goes on to say ;

" Further, he ought to render an account of the silver, effects, and merchandise, in the warehouse of Mr. Perrot, who, as a citizen, could not be pillaged according to the capitulation ; of the effects, money, and cattle of the inhabitants, who have been pillaged contrary to the promise given ; of the money and effects of the soldiers, that have been taken from them ; of the sacred vessels and ornaments of the church, and every thing that has been broken, and the money and effects of the priests.

" All which things I demand should be restored in virtue of my capitulation. Also, as is just, that their arms and liberty should be given to the soldiers of my garrison, and their passage to Quebec or France, as he promised me."

The request contained in the above paper seems reasonable enough, yet it was but partially granted. I cannot find from the records of the Council, that De Meneval was admitted to the hearing which he claimed, or even allowed to adduce evidence of what was the most important fact, namely, that

the articles of capitulation guarantied the safety of private property. The only notice which the Council took of the paper, was to order the restoration of his chest and clothes, which still remained in the custody of Sir William. Some delay took place in the execution even of this resolve, as appears by a note from Governor Bradstreet to Phips, dated January 7th, 1691; in which he was reminded, that the order for delivery had been notified to him, yet the Frenchman had only the day before complained, that he had not received the clothes, of which he was in great want. The note contained a positive injunction, that the articles should be immediately given to their former owner.

The force sent against Port Royal was certainly sufficient to compel the garrison to surrender unconditionally. Had it done so, it might be unreasonable to censure, in strong terms, the seizure of private property. The French had universally adopted the practices of their Indian allies; and any severity at Acadia, short of actual massacre, would have been no more than fair retaliation for the cruelties suffered the preceding winter, by the defenceless people of Schenectady and other towns. Unluckily, it appears, that articles of capitulation were granted at the taking of Port Royal; and, consequently, that taking plunder from private persons was a shameful breach of the public faith.

Phips had received no military education, and seems to have had little idea of military honor. It is but fair to add, however, that the responsibility of the affair rests no more upon him, than upon the Governor and Council of the colony. The property was taken in their name, delivered to them, and by them retained to defray the cost of the expedition, though repeatedly demanded back by the French. The poverty of the colony at that time accounts for, though it does not justify, such a proceeding.

There was little reason for the other complaints, respecting the unjust detention of the prisoners. The Council were anxious, in this respect, to redeem the pledges which had been given. Shortly after the return of the fleet, the following order was passed: "Whereas, the French soldiers, lately brought to this place from Port Royal, *did surrender on capitulation*, liberty is granted them to dispose themselves in such families as shall be willing to receive them, until there be opportunity to transport themselves to some of the French king's dominions in Europe." This order is dated June 14th, 1690, and we hear nothing more of the matter till October 18th, 1691. At this time, the Chevalier de Villebon, on occasion of restoring some English prisoners, complained that "Sir William Phips, against the rights of war, had carried away prisoners, M. de Meneval and fifty-nine

soldiers, after having given them his word to send them into some port of France;" and required, that the said men should be now returned.

This letter was not answered till the March following. It was then admitted, that such promise had been given; "but the men themselves voluntarily waved the performance of it, and of their own choice and desire were brought hither; where they have not been held prisoners, but left at their own liberty, to dispose of and transport themselves to France, or to the French plantations in the West Indies. Many have embraced the same, and are gone. The others we will now send."

## CHAPTER III.

*Naval Expedition under Phips against Quebec.  
— Its Failure.—Disasters to a Part of the  
Fleet on its Return.*

THE complete success of the first considerable attempt against the French, encouraged the colonists to prosecute the design, which had been previously entertained, of an expedition against Lower Canada. The annoyance which they continued to experience from the Indians and their allies, proved that nothing could secure them entirely, but the capture of this last strong-hold of the enemy. The want of pecuniary means had hitherto proved an insurmountable obstacle, but the reduction of Acadia had shown that a war might be made to support itself. A number of men could be easily levied, and the want of arms and ammunition could be supplied by an application to the government of the mother country.

Could some English frigates also be obtained, to attack Quebec and Montreal by water, while the colonists should undertake an expedition over land, success seemed highly probable. Count Frontenac, it was true, still commanded at Que-

bec; and, though advanced in years, proofs had been received of his enterprising disposition and military talent. But the number of French, capable of bearing arms, was known to be relatively small; and, in the defence of a fortified town, little use could be made of their Indian allies. Despatch was all-important, both to prevent the French taking the alarm from the capture of Port Royal, and to protect the frontier settlements.

The first hint of the design is contained in a letter, dated April 1st, 1690, from Deputy-Governor Danforth to Sir H. Ashurst, the agent of the colonies in England, requesting him to obtain an immediate supply of powder and muskets. On the 28th of May, two days before the return of Phips, a bill for "the encouragement of volunteers for the expedition against Canada," passed the House of Deputies in Massachusetts. It appointed Sir William Phips commander-in-chief, and Major John Walley, his second in command. To induce men to enlist, it was ordered, that, in addition to the stated pay, "one just half part of all plunder, taken from the enemy, should be shared among the officers, soldiers, and seamen, stores of war excepted."

On the 6th of June, a loan of several thousand pounds was authorized; and, to encourage persons to subscribe to this loan, the House voted, that, "besides the repayment of their money, after

all charges of the expedition were defrayed, and the proportion of plunder assigned to officers, seamen, and soldiers, the remainder should be equally divided between the country and the subscribers." The next day after the passage of this order, Sir William Phips, Major Elisha Hutchinson, and seven others, were "appointed a committee to manage and carry on the expedition against Quebec, and to impress ships and stores."

The resolutions given above are curious, as evincing the entire destitution of means, under which the inhabitants of Massachusetts, without any promise, hardly a reasonable hope, of obtaining assistance from England, resolved upon so important an expedition as that against Quebec. The colony was already in debt, and the taxes were as high as the people could bear. But Acadia had been acquired without expense to the country, and they trusted that Canada might be gained in the same way.

The prospect of plunder was an inexhaustible bank, and they drew upon it without hesitation or reserve. Exaggerated reports were spread of the wealth obtained by those who shared in the former expedition, and the expectation of serving under so successful a commander soon filled the ranks with volunteers. The government had not ships enough, and the merchants were unwilling to trust their property on so hazardous a venture;

but they were compelled to do so, by the order for impressment. By the middle of July, a fleet of thirty-two vessels, having on board about twenty-two hundred men, was ready for departure.

Some delay intervened from the want of pilots, and the expectation of receiving from England a further supply of ammunition and arms. The English seamen were not acquainted with the navigation of the St. Lawrence, and Capt. Alden, in the sloop Mary, had been despatched, on the 26th of June, to Port Royal, in the hope of finding there some seamen who had traded to Quebec, and would be qualified to act as pilots. He was unsuccessful, however; and, after waiting nearly a month for the expected supplies from England, the lateness of the season obliged the fleet to sail, relying on chance for their guidance up the river, and but scantily furnished with the munitions of war.

An arrangement had been made with the governors of New York and Connecticut, by which a land expedition from these colonies was to march in such season, as to appear before Montreal at the same time that the fleet under Phips threatened Quebec. Could this plan have been executed, it would have caused a division of the enemy's forces, and well nigh have ensured success.

Leisler, the acting governor of New York, en-

tered zealously into the scheme. A force of a thousand men was raised, and the coöperation of fifteen hundred Indians of the Five Nations had been promised. But various difficulties interposed. Disputes arose between the commanders of the New York and Connecticut forces, which retarded the setting out of the troops. When they at last reached the borders of the Lake, it was found that the arrangements for providing boats had failed, and there were no means of transportation.

The emissaries of the French, also, were busy among the Indians, who began to desert in such numbers, that it was evident that the whites would soon be left alone. Under such circumstances, the commanders concluded to abandon the attempt, and the troops returned.

Sir William's fleet left Nantasket on the 9th of August. It was divided into three squadrons, the largest of which, consisting of thirteen sail, was commanded by Capt. Sugars in the *Six Friends*, a ship of forty-four guns and two hundred men. It was not a government vessel, but belonged to some merchants of Barbadoes. The two other divisions, of nine sail each, were commanded by Captains Gilbert and Eldridge, in the *Swan* and the *America Merchant*. A few small prizes were taken by the way, and a foolish parade was made of landing occasionally, and setting up the English

flag, on a barren and uninhabited coast. The end of the month arrived before they reached the mouth of the St. Lawrence.

Ignorant of the channel, they were compelled to proceed with great caution, while adverse winds still farther delayed their progress. The small-pox, which prevailed in Boston at the time of their departure, had got into the fleet, and, together with fevers, was making considerable ravages among the troops. Some unnecessary delay was created by the vessels anchoring, that the officers might hold a council of war, to fix regulations for the conduct of the troops, and to settle the plan of attack; points which ought previously to have been determined, or have been left to the discretion of the commander-in-chief. They attempted to do this at the Isle of Percy; but a storm came on, the fleet was thrown into great confusion, and they were obliged to relinquish their purpose.

On the 23d of September, they came to anchor at Tadousack, where proper orders were drawn up and read in every vessel. On the 27th, they were within twenty-five leagues of the point of destination; yet, to pass this short distance occupied them till the 5th of October, when they appeared before Quebec.

From the state of the enemy's preparations, these several delays were peculiarly important, and probably saved the city. At the end of Sep-

tember, Frontenac was still at Montreal, actively employed in strengthening that place against the expected attack from the New York and Connecticut forces. He heard of the failure and return of these troops, and of the appearance of the fleet under Phips in the river, at the same time. Leaving M. de Callières to bring down as many of the inhabitants as possible, he hastily embarked what troops he had in boats, and rowed night and day to get to Quebec before the English. In three days he arrived, and immediately ordered the weakest points to be fortified, and batteries to be raised, though there were but twelve pieces of artillery in the place, and but little ammunition.

While they were at work on the fortifications, regular troops, militia, and confederate savages were continually coming in, till the garrison swelled to a number equal, if not superior, to the English force. La Hontan, a French writer, who was on the spot, asserts, that had Sir William effected a landing before the arrival of Frontenac, or even two days afterwards, he might have taken the city without striking a blow. There were then but two hundred regular troops in the place, which was open and exposed in every direction.\*

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\* Voyages du Baron de la Hontan dans l'Amérique Septentrionale. Amsterdam, 1705. Vol. I. p. 298.

Hontan was born in Gascony, in 1666, and served in Canada, first as a soldier, then as an officer. From

Instead of making an immediate attack, nothing was done on the day of arrival, probably because it was Sunday. On the 6th, a major in the army was despatched to the shore, with a summons to the governor to surrender.

The messenger was introduced blindfold into the presence of the governor, who was surrounded by his officers. When the letter had been read, Frontenac was so much irritated at what he termed its insolence, and so confident of his own power of resistance, that, as Hontan asserts, he threatened the life of the officer who brought the summons. He could not have been serious in such a threat; at any rate, the interference of the bishop and others prevented its execution. Frontenac then flung the letter in the messenger's face, and gave his answer, "That Sir William Phips and those with him were heretics and traitors, and had taken up with that usurper, the Prince of Orange, and had made a revolution; which if it had not been

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Canada he was sent to Newfoundland as king's lieutenant, where he quarrelled with the governor and was cashiered. He retired to Portugal, and afterwards lived for some time at Amsterdam and at Copenhagen.

The edition referred to is not the earliest, since a translation of the work appeared at London in 1703. Two other editions of the original were printed in Holland before the year 1710. An abridgment may be found in Harris's "Collection of Voyages and Travels," in two volumes, folio.

made, New England and the French had all been one; and that no other answer was to be expected from him, but what should be from the mouth of his cannon."

When the officer returned, it was found that the state of the tide did not permit a landing that day, and a council was accordingly held, and arrangements were made to disembark the troops on the morrow. The soldiers were to be put ashore on a beach, about three miles below Quebec, and would be obliged to cross a small river, before they could reach the town. After they had landed, the troops were to advance as far as possible, and encamp for the night. When the night tide served, the smaller vessels were to land a supply of provisions, ammunition, and pioneers' tools, while the boats of the fleet were to ascend the smaller river, to ferry the troops across.

The command of the forces on shore was given to Walley, on account of his greater military experience; while Sir William, with four of the largest ships, was to sail up the river, and commence a cannonade on the lower town. In case the party on shore should succeed in passing the river St. Charles, two hundred men were to be landed from the ships, under cover of the guns, and a simultaneous attack be made on the upper and lower town.

On the 7th, though the weather was tempestu-

ous, they attempted to put this plan in execution. The smaller vessels got under way, so as to come near the shore, and all the boats of the squadron were prepared for landing the troops. But the wind blew with such violence, that the boats were entirely unmanageable, and it became evident, that to persevere would spoil their ammunition and endanger the lives of the men. A bark, commanded by Captain Savage, with sixty men, ran aground, and, as the tide fell, remained immovable within a short distance of the land.

The enemy, perceiving the accident, immediately lined the shore, and commenced a sharp fire of musketry, while a field-piece was conveyed from the town, and brought to bear upon the vessel. The situation of Savage was now extremely hazardous, for no boats could come to his assistance; and the larger vessels durst not approach, for fear also of taking the ground. But he defended himself with obstinacy, his men returning the enemy's fire under cover, and with greater effect. Sir William's flag-ship at last got so near, as to throw a few shot among the French, who immediately dispersed; and, at the turn of the tide, the bark floated off without material damage.

The next day, the attempt at landing was renewed with better success. The number of effective men had been so far reduced by sickness, that only about thirteen hundred were put on shore,

and some of these were unfit for hard service. Each man took with him but three quarters of a pound of powder, about eighteen shot, and two biscuits, as they relied on a full supply at night. The beach shelved so gradually, that the men were obliged to wade a considerable distance; and, as the cold was already severe, they landed wet, chilled, and dispirited.

At a short distance from the landing-place was a bog overgrown with wood, in which were stationed, according to the French account, about two hundred forest rangers, fifty officers, and a number of Indians. Walley's men were suffered to advance about half way into this thicket, when a galling fire was opened upon them in front, and on both flanks. This caused a cry of "Indians! Indians!" and for a few moments the troops were in great confusion. But the New-Englandmen of that day had been well trained to this species of bush-fighting, and, after the moment of surprise was past, the men formed with firmness, and pushed the French and savages before them in every direction. In this skirmish, the English acknowledge a loss of five killed and twenty wounded, while they killed about thirty of the enemy.

A small village was on the right; and as the enemy were there sheltered in the houses, and the troops had already spent nearly all their ammuni-

tion, the commander determined to advance no farther than to a solitary house and barn, situated in the outskirts of the wood, and to encamp for the night. It would have been better, under all circumstances, to occupy the village, and thus to obtain shelter from the weather. It was two o'clock in the afternoon when they landed, and so much time had been occupied in skirmishing, that night came on when they had advanced only a mile from the landing-place.

The barn had been set on fire in the confusion that ensued from driving a few skirmishers out of it, and the house could shelter only a few of the officers. The men were obliged to bivouac in the open air, as no coverings had been brought from the ships, and to build large fires, to dry their clothing and protect them from the cold. The winter had set in unusually early and severe, and, during the night, the ice formed of sufficient thickness to bear a man. Besides other discomforts, the men had no provisions but the few biscuits, which they brought with them, for the inhabitants had driven all their cattle to the woods beyond the village.

About midnight, according to the plan agreed upon, the small vessels came up the river; but, instead of the expected supplies, they landed only six brass field-pieces, which, in the present situation of the troops, were a mere incumbrance. The

place at which they were to cross the St. Charles was still at a considerable distance, and the intervening ground was marshy and broken with many deep gullies. It was vain to think of drawing the artillery by hand, and they had no horses. A message was sent for more ammunition and provisions, but they could obtain only half a barrel of powder and a hundred weight of bullets.

The cause of this failure in the arrangements was the strange eagerness of the commander-in-chief to have his share in the engagement. The council had resolved, that no attack should be made on the lower town, till the land troops had crossed the St. Charles, and were ready to assault the heights. But the troops were no sooner ashore, than Sir William, with the four large ships, sailed up to the city, and opened his fire. Hardly any damage was done ; for the houses were mostly of stone, and the sides too thick for a ball to penetrate, while the fire was returned with considerable effect from a small battery, which the enemy hastily erected. The ships anchored about a musket-shot off, and cannonaded till dark, when they had spent all their powder, except two rounds apiece, and the larger vessels had received considerable injury in the hull. They were then compelled to drop down the river, the admiral's ship leaving behind its best bower anchor and cable.

Having fired away much of their powder against

the rocks, no supply could be sent to the troops on shore. On the morning of the 9th, it was found, that several of the men were disabled, from having their hands and feet frozen, and some others had sickened of the small-pox. A council of war was held, to hear the information communicated by a French deserter, who came over in the course of the night. He informed them, that all the French forces had been concentrated at Quebec, with the exception of fifty men, who were left at Montreal ; that there were more than three thousand troops in the city, besides a force of about seven hundred, who were concealed in a swamp close at hand ; and that a battery of eight guns had been raised, to prevent the English from crossing the river. The account was evidently exaggerated, and subsequent events made it appear not improbable, that the man had been despatched for the express purpose of deceiving them.

Walley seems to have been frightened, and rendered incapable of forming or executing any plan whatever. Instead of pushing directly for the river and attempting to force a passage, or of returning immediately to the ships, he merely shifted the place of encampment to a spot where the men were better sheltered, and there assumed the best posture he could for defending himself. Parties were sent out to gain intelligence, and procure

provisions ; but they brought back little but fearful accounts of the strength and preparations of the enemy. A small quantity of spirits and a biscuit apiece for the men were procured from the ships.

The enemy did not venture a direct assault, for which they had not sufficient strength on that side of the river ; but they harassed the troops with continual skirmishing, in which a number of men were lost on both sides. The French account acknowledges, that the English generally fought well, and attributes the want of success to their imperfect discipline, and the inefficiency, if not the cowardice, of their commander.

On the next day, the men still remaining in their encampment, it was resolved, that the commander should go on board, to communicate their situation to Sir William, and receive his orders for the future disposition of the troops. The message would have been more properly intrusted to a subaltern ; but, through the whole affair, Walley seems to have manifested a particular wish to withdraw himself from the line of fire. Phips received from him a full, if not exaggerated account of their present difficulties, and of the obstacles that prevented an advance. The banks of the St. Charles were steep, and commanded by a heavy battery ; and if they succeeded in forcing their way across, it would be necessary to attack a walled town, garrisoned by more than twice their number.

Under such circumstances, the commander-in-chief could not hesitate. Walley was ordered to draw his men back to the beach, and be in readiness to reembark on the following day.

While the commanders were still in conference, they were alarmed by the sound of sharp firing from the shore. Walley hastily returned, and found the troops actively engaged by the French and Indians, who had assaulted the camp. Major Savage, who was left in command, had maintained his ground for some time ; but, finding that the men acted to disadvantage in the swamps and thickets, a retreat took place, and the enemy hung on the rear. The pursuit ceased when they reached the open ground, and the men remained where they were till midnight, when they silently withdrew to the beach, where they had landed.

On the next morning the enemy assembled in force in the adjoining thicket, and fired occasionally with artillery, which they had brought from the city. It was judged hazardous to embark in open day, in the presence of so large a force ; especially as the men were now so much disheartened, that they rushed tumultuously to the water's edge, the moment the boats touched the beach. The boats were therefore ordered off till nightfall, and strong detachments were sent to drive the enemy from the woods in their immediate vicinity. This service was successfully performed, and the troops

remained unmolested during the rest of the day. At night, the troops were safely conveyed to the ships, though in the hurry of the moment the guns were forgotten, and five pieces were left on shore.

The cowardice and incompetency of Walley are sufficiently apparent from his own account. Instead of being the last man to leave the shore, he was among the first to embark; and that too, when, according to the French account (though he does not allude to the fact), the enemy were keeping up a constant fire, which was the cause of the great confusion that prevailed. His authority was insufficient to quell the disorder, and he catches at a trivial pretence for rowing off to the ships, leaving the men and artillery to their fate.

On the 12th a council of war was held, and various plans were discussed for renewing the attack. The men were too much exhausted to be put upon immediate service; but it was agreed to wait till they had recruited their strength, and then to be guided by circumstances. In the mean time, a boat was despatched to the shore to propose an exchange of prisoners; and seventeen men, who had been captured at Casco, were released in exchange for as many Frenchmen, who had fallen into the hands of the English. The possibility of another attempt was at once precluded by a violent storm, which drove many of the vessels from their anchorage, scattered the fleet, and obliged them all to make the best of their way out of the river.

The causes of the failure of this unlucky expedition are but too apparent. The time lost, in waiting for a supply of ammunition from England, delayed the arrival of the expedition till the cold weather set in ; Phips, from his want of judgment and of experience in military affairs, was little qualified for the direction of such an enterprise ; and the second in command was a coward. Many complaints were made of the conduct of Walley, but no one interested himself as prosecutor, and the investigation was suffered to drop.

The return of the fleet was even more disastrous than the voyage out. The weather was tempestuous, and no efforts could keep the fleet together. One vessel was never heard of after the separation ; another was wrecked, though the crew were saved ; and the third, a fire-ship, was burnt at sea. Four ships were blown so far from the coast, that they did not reach Boston for five or six weeks after the arrival of Sir William, when they had been given up for lost.

## CHAPTER IV.

*Difficulties created by the Failure of the Canada Expedition.—Issue of Paper Money.—Phips goes to England.—Negotiations respecting the Renewal of the Charter.—New Charter granted, and Phips appointed Governor.—His Return, and Reception at Boston.—Salem Witchcraft.*

THE unfortunate issue of the expedition against Quebec threw the government of the colony into great embarrassment. They had relied entirely upon the success of the attempt, and upon the plunder, which would thereby be obtained, for money to pay the soldiers, and defray all other charges. The treasury had been drained by the cost of fitting out the fleet, and the soldiers were clamorous for their pay, when the government had not a shilling to give them.

Bills were passed, imposing extraordinary taxes, the returns of which, in two or three years, would be sufficient to meet all demands. But this could not satisfy the soldiers, whose necessities were pressing and immediate.

To relieve them, recourse was finally had to an expedient at that time novel. Bills of credit were

issued, which the faith of the colony was pledged to redeem. The notes were of various denominations, from two shillings up to ten pounds sterling ; and as no greater amount was issued, than would be brought into the treasury in a year or two by the taxes, and as express provision was made, that these notes should be received, even at five per cent advance, in payment of the rates, it was hoped, that the paper would circulate, as of equal value with gold and silver.

Such, in fact, would have been the case, had the country at the time been under a more settled government. But the people fancied the loss of the old charter a greater evil than it really was. They had not yet recovered it, and the prospect of such an event seemed every day more distant. The authorities existed only by sufferance ; and, as the King could at any time remove the sitting magistrates, or refuse to sanction their acts, no guaranty issued by them was considered as perfectly safe. Every expedient was tried to keep up the credit of the notes, but with imperfect success. Sir William Phips, enjoying a large private fortune, and conscious that a portion of the blame for the present embarrassments might be imputed to him, exchanged a large amount of gold and silver for the bills at par. Still the credit of the bills fell so low, that the holders of the paper could not obtain more than fourteen shillings in the pound.

When the taxes came to be paid, the paper of course rose to the value, at which the government were pledged to receive it. This benefited the persons who held the notes at that time, but was a mere aggravation of injury to the poor soldier, who had been compelled to pass his notes at the depressed value.

In the coming winter, that of 1690 - 91, much injury was to be expected from the incursions of the Indians. Fortunately, the tribes at the eastward showed themselves disposed for peace. A party of them came to Wells with a flag of truce, and proposed, that there should be a cessation of hostilities for six months. Commissioners from the General Court were despatched to meet them; and, on the 29th of September, they agreed upon a truce till the 1st of May ensuing.

This treaty took away from Sir William Phips all hopes of employment in the public service. He resolved upon another visit to England, with the view of laying before the King himself the considerations in favor of another attempt to wrest from the French all their North American possessions. He accordingly embarked in the depth of winter, and after a tedious passage arrived at Bristol, whence he hastened to London.

He there offered the King his services in the command of a second expedition; and in a paper, which he presented, strongly urged the importance

and feasibility of the scheme. He represented, that the success of the design would give the English the exclusive benefit of the fur trade, and secure from farther injury the Hudson's Bay Company, several of whose factories had recently fallen into the hands of the enemy. It would also secure the Newfoundland fisheries, and materially increase the number of ships and seamen engaged in that business. But, if the French were allowed to keep possession of the country, the constantly increasing influence of the priests must finally engage all the Indians in their interest; a result, which would endanger the safety, not only of New England, but of all the American colonies.

The experience of half a century was required, before the English government could perceive the force of these arguments; and the enterprise was then undertaken and carried through, at an expense of blood and treasure a hundred-fold greater than what would have been necessary, had they yielded at the time to the representations of the colonists. But King William was too busy with the war in Holland, to think of an enterprise against so remote a province as Canada.

By renewing his intimacy with Increase Mather, who was still in London forwarding the application to restore the Massachusetts charter, Phips was again induced to lend his assistance, in the hope once more of establishing the rights of his country-

men on a permanent basis. The utmost anxiety was felt at home upon this subject, for the recollection of what had been suffered under the former governor was still fresh in the minds of all; and the fact, that Andros was not censured after he was sent to England, seemed to prove, that the King and ministers regarded his administration as severe, but not illegal.

The proceedings of the agents were embarrassed by the existence of two parties at home on this subject, and by a corresponding difference of opinion among themselves. Attached to the old form, under which the affairs of the colony had been so long administered, many of the people would hear of nothing but the restoration of the ancient charter; and, if this could not be obtained, they would accept no new form, which would abridge, though not destroy, their former privileges. They preferred to rely on the moderation of the court. Since the Revolution, the government had been conducted on the old principles; and, though this was confessedly a temporary arrangement, and dependent on the pleasure of the King, they hoped it would be allowed to continue. The old charter or none, all or nothing, was the motto of the party. Among the agents in London, Cooke, Oakes, and Wiswall were firmly attached to these sentiments.

A more moderate and rather more numerous party, though they preferred the old form, were

yet willing to compromise, and to accept a new charter, which would secure the enjoyment of their most important rights. The former instrument was defective, and contained no grant of certain powers, which were essential to the very existence of the colony. It did not authorize the grantees to inflict capital punishment, to constitute a house of representatives, to impose taxes, or to incorporate towns or colleges. These powers had indeed been assumed, yet without any authority in the terms of the charter. It would be folly, then, to appeal to the Court of Chancery. Though the former sentence of that court might be reversed, on the ground of some defect in legal forms, a new writ might at any time be issued, and the charter be again adjudged void in a legal manner. It was better, then, to purchase, by the relinquishment of a few privileges formerly assumed, the confirmation and establishment of the most important immunities. Such was the opinion of Sir Henry Ashurst and Mr. Mather, the other colony agents, and Sir William Phips, whose name had considerable weight, assented to their views.

The hope of recovering the old charter now appeared to be entirely fallacious. Even the draft of a new instrument, which conferred all the former privileges, except the election of their own governor, was at once rejected by the Privy Council. Mr. Mather and Sir William accordingly

united their efforts to procure a new charter, though they met with nothing but opposition from the other agents. Mather was introduced to the King by the Duke of Devonshire, on the 28th of April, 1691. Among other reasons for restoring the privileges formerly enjoyed, and for appointing a New England man as governor, he then urged the great exertions made by the colonists to enlarge the English dominions. The expedition to Canada was particularly referred to, as "a great and noble undertaking."

Two days after this conversation, the King signified to the agents, "that he believed it would be for the advantage of the people in that colony to be under a governor appointed by himself. Nevertheless, he would have the agents of New England nominate a person, that should be agreeable to the inclinations of the people there; and, notwithstanding this, he would have charter privileges restored and confirmed unto them." The King departed for Holland the day after giving this promise; and the attorney-general was ordered to draw up the heads of a charter on the principles, which he had heard approved by his Majesty.

This draft was finished and presented some time in June, and received the approbation of the Council, though Mather protested strenuously against it, and declared he would rather die, than consent to that, or any thing else, by which the liberties of

his country would be infringed. But the Council treated his objections very cavalierly, telling him, that the agents were not the plenipotentiaries of a foreign state, and must submit, or take the consequences. The Queen, however, was induced to interfere, and to write to the King requesting that the minutes might be altered, or that the matter might be deferred till his return. But his Majesty signified his pleasure, that the charter should conform to the principles drawn up in writing by the attorney-general ; and all that the unwearied solicitations of Mather could effect, was that a few important articles should afterwards be inserted.

The question respecting the acceptance of the instrument, in this form, was debated with heat among the agents and in the colony. The opposition to it became the great cause of the unpopularity of the new governor, and formed a considerable impediment to the success of his administration.

Early in September, 1691, Mr. Mather was desired to give in his recommendation of a candidate for the office of governor. His own mind had long been made up, though many had applied to him. The fact that Sir William Phips was a native of New England, that he possessed a high rank and considerable estate, that he had already served the crown in several important capacities, and had obtained the favor of the King without forfeiting his popularity at home, pointed him

out as far the most eligible person for the office. His name was accordingly presented to the Council by Sir Henry Ashurst and Mr. Mather; and the latter, when he obtained an audience of his Majesty a few days afterwards, addressed him as follows.

“Sir, I do, in the behalf of New England, most humbly thank your Majesty, in that you have been pleased by a charter, to restore English liberties unto them, to confirm them in their properties, and to grant them some peculiar privileges. I doubt not, but that your subjects there will demean themselves with that dutiful affection and loyalty to your Majesty, as that you will see cause to enlarge your favors towards them. And I do most humbly thank your Majesty, in that you have been pleased to give leave unto those that are concerned for New England to nominate their governor.

“Sir William Phips has been accordingly nominated by us at the Council Board. He hath done a good service for the crown, by enlarging your dominions, and reducing Nova Scotia to your obedience. I know that he will faithfully serve your Majesty to the utmost of his capacity; and if your Majesty shall think fit to confirm him in that place, it will be a farther obligation on your subjects there.”

A commission was accordingly prepared under

the great seal, by which Sir William Phips was appointed Captain-general and Governor-in-chief of the Province of Massachusetts-bay in New England. By the new charter, there were included under this title the whole of the Old Colony, also the Colony of new Plymouth, the Province of Maine, of Nova Scotia, and all the country between the two last-mentioned places, as far north as the River St. Lawrence. His commission also appointed him Captain-general of the Colonies of Connecticut and Rhode Island. Sir William was admitted with Mr. Mather to kiss the King's hand on his appointment on the 3d of January, 1692. Early in the spring, he sailed for New England in the *Nonsuch* frigate, and arrived at Boston in May.

The General Court, then in session, immediately, though with some opposition, passed a vote, appointing a day of solemn thanksgiving to Almighty God, "for granting a safe arrival to his Excellency our Governor, and the Rev. Mr. Increase Mather, who have industriously endeavored the service of this people, and have brought over with them a settlement of government, in which their Majesties have graciously given us distinguishing marks of their royal favor and goodness."

On the Monday following his arrival, the new governor was conducted from his own house to the town-house by a large escort of military, and a number of the principal gentlemen of Boston and

the vicinity. The ceremony was opened with prayer by Mr. Allen, a minister of Boston. The charter was first read, then the governor's commission, after which the venerable Governor Bradstreet resigned the chair. The commission of the lieutenant-governor, Mr. Stoughton, was read, and Sir William was then conducted with the same parade to a public dinner, and afterwards to his own house.

The affairs of the province were in a disorderly state, and immediate action was required to defend it against the public enemy, and to settle some domestic troubles. The Indians, who had failed to perform their promise the year before, to come in at the conclusion of the truce and make a general treaty of peace, were now ravaging the frontiers, and the French privateers, which swarmed upon the sea-coast, gave great annoyance to the shipping.

With respect to internal affairs, it was necessary for the General Court to act immediately upon the statutes; for the colony laws under the old charter had been annulled by the publication of the new. In the various proceedings on these subjects, the opposition party among the people, and in the Assembly, found little reason to complain of the conduct of their new governor. Either from embarrassment arising from the novelty of his situation, or from a wish to conciliate the favor of the

people in the outset, Sir William gave up the exercise of certain powers that belonged to him by the charter. Thus, at the first meeting of the council, for the appointment of civil officers, he permitted them to be nominated by the members present, he himself only voting on the question of their approval. But this practice would have materially lessened the influence of the office, and it was soon abandoned.

The representatives were treated in a manner no less conciliatory. Cotton Mather affirms, that he was accustomed to hold the following language towards them ; and though, from such a reporter, the words themselves cannot be received as very authentic, they are sufficiently indicative of the general tenor of his administration. “ Gentlemen, you may make yourselves as easy as you please for ever. Consider what may have any tendency to your welfare, and you may be sure that whatever bills you offer me, consistent with the honor and interest of the crown, I will pass them readily. I do but seek opportunities to serve you ; had it not been for the sake of this, I had never accepted the government of this province ; and whenever you have settled such a body of good laws, that no person coming after me may make you uneasy, I shall not desire one day longer to continue in the government.”

The commencement of Sir William’s adminis-

tration was distinguished by a series of events, which left the darkest spot that rests upon the early history of New England. I refer to the prosecutions, which took place at Salem and other towns, for the supposed crime of witchcraft. After all the allowance, that can be made for the peculiar character of the times and the men, and for the blighting effect upon all natural feeling of a stern and unenlightened sense of religious duty, there will yet be cause to wonder at the infatuation, which could lead pious, learned, and well-meaning men so widely astray.

The history of this remarkable delusion falls not within the design of the present work. To trace Sir William's personal agency in the affair, and to ascertain his individual opinion on the subject of witchcraft, would be interesting, did any materials exist for such a purpose. But he was neither a journalist nor a letter-writer, and we are left to gather his opinions from the casual notice taken by contemporary writers of his public acts.

I have attributed the strength of the delusion and its lamentable consequences to religious feeling ; and the fact, that the pastors of the churches had the principal share in creating the excitement, and in supplying matter for the prosecutions, seems to corroborate this statement. The first trial for witchcraft arose from some occurrences in the family of a clergyman ; and Parris and

Noyes, ministers of Salem, and the Mathers, father and son, were most active in every stage of the proceedings. The laity also were engaged, but their zeal was fanned and directed by exhortation and instruction from the pulpit.

Stoughton, the lieutenant-governor, who presided in the trials at Salem, was certainly an active prosecutor; but there is no evidence that the governor furthered the proceedings in any other way, than by sufferance. Sir William, however, was not a man of sufficient reflection and judgment, to form opinions contrary to the prevailing belief; and, as on all subjects he was much under the influence of Cotton Mather, it is not unlikely, that he agreed with his spiritual adviser on this point.

When Phips arrived with the new charter, the prisons were crowded with suspected witches, and his first act was one of evil omen to the accused. The jailers were ordered to put them all in irons. The government were driven upon this act by the outcries of the accusers, who, thinking the arrival of a new governor a fine opportunity to show their zeal, immediately complained, that they were afflicted by those in prison, though formerly, their sufferings had ceased upon the commitment of the guilty. Sir William seems not to have been in earnest in the proceeding; for the officers were permitted to evade the order, by put-

ting on the irons indeed, but taking them off again immediately.

The extravagance of the accusers had at last its proper effect, in opening the eyes of the public. Emboldened by success, they hesitated not to denounce all, of whatever rank or respectability in life, who dared to resist the prevailing opinion, or manifest any opposition to the proceedings. Thus, they intimated, if they did not openly assert, that the lady of the governor was a witch. Hutchinson tells a story, on the authority of a manuscript letter, which supplies a reason for so strange a charge.

"In Sir William's absence," says the writer of the letter, "his lady, I suppose on account of her name's being Mary, (William and Mary,) was solicited for a favor in behalf of a woman committed by one of the judges, on accusation of witchcraft, by a formal warrant under his hand and seal, and in close prison for the trial the next assizes, then not far off. The good lady, *propriâ virtute*, granted and signed a warrant for the said woman's discharge, which was obeyed by the keeper, and the woman lives still, for aught I know. Truly I did not believe this story, till I saw a copy of the mittimus and discharge under the keeper's hand, attested a true copy, for which discovery the keeper was discharged from his trust, and put out of his employment, as he himself told me."

The whole delusion respecting the practice of witchcraft was as short-lived, as it was violent. Some time elapsed, before the clergy were able to perceive, or frank enough to acknowledge, their error. But the people were awakened by a sense of common danger ; and, though a few infatuated individuals continued to urge prosecutions, the juries refused to convict. The last act of Sir William Phips, as governor of the country, was to issue a general pardon to all those, who had been convicted or accused of the offence. This act had particular reference to several individuals, who, in the heat of the excitement, had been charged with the crime and committed to prison, but through the connivance of the jailers, or the exertions of their friends, had made their escape, and taken refuge in a neighboring province.

## CHAPTER V.

*Legislative Acts. — Indian War. — Attack upon Wells. — Building of Fort William Henry. — Elections in May, 1693. — Unpopularity of Phips. — Peace concluded with the Indians at Pemaquid. — Phips quarrels with Short and Brenton. — Recalled to England. — His Death and Character.*

WHEN the officers under the new charter entered upon the performance of their duties, the affairs of the province were embarrassed, and the confusion was increased by the necessity of postponing much pressing business, till the excitement caused by the witchcraft affair had a little subsided. I have already said, that the old colonial laws were vacated by the provisions of the new charter. The General Court, which met in June, 1692, merely passed an act, that the former laws should continue in force till November of the same year, and then adjourned till the second Wednesday of October.

When they again assembled, no attempt was made to frame a body of laws, which might at once be transmitted to England for approval, and form a basis for all subsequent legislation; but acts were successively framed and passed, as the emergencies of the moment called for them. Ac-

customed to legislate only on the basis of existing laws, the members of the Council and the Assembly were only confused by a call to frame, as it were, the government *de novo*, and the governor had not the skill nor the information necessary to direct them. Some of their laws were approved by the King, others were sent back for alteration, while the country suffered from the delay. The proceedings were further embarrassed by the existence of a large party opposed to Phips, who threw every obstacle they could in the way of the administration.

The old attachment to their liberties, and desire for their complete ratification, were conspicuous in the first actions of the House. What was called a law, (but it was rather a declaration of rights, for most of its provisions were copied from *Magna Charta*,) was passed at an early period, and despatched to England. It declared, that "no aid, tax, tallage, assessment, custom, loan, benevolence, or imposition whatever," should be laid, under any pretence, but by the act and consent of the Governor, Council, and Representatives assembled in General Court. This bill met with the fate, which might have been expected. It was disallowed by the King, as were also some laws for the punishment of crimes, which were drawn up too closely in the spirit of the Jewish code.

Meanwhile the frontiers were suffering under

the barbarities of an Indian war. It raged chiefly in the eastern part of the province, where the savages, recruited in strength the preceding year by a six months' truce, were now carrying it on with fresh vigor. Major Hutchinson, who commanded the English forces, was at Portsmouth ; he had distributed his small body of troops along the frontier line, which had been much contracted by the loss of York.

Captain Converse, with fifteen men, was posted at Storer's garrison-house, in Wells. Early in June, two sloops came up the small river at that place, with fifteen men on board, bringing a supply of ammunition. On the 10th, the garrison was alarmed by the running of wounded cattle from the woods. Thus informed of the approach of the enemy, preparations were made to receive them, by bringing the sloops as near as possible to the garrison, and keeping a strict watch during the night. The enemy, who consisted of about four hundred French and Indians, commanded by Monsieur Labocree, commenced the assault early in the morning. They kept up the attack more than forty-eight hours, when they retired with the loss of their commander and a number of men ; while the garrison had but one killed by a musket-shot, and one was taken prisoner in passing from the sloops to the fort, and tortured to death.

This attack upon Wells was the only considera-

ble attempt made by the enemy, in the course of the year; but, by lurking in the vicinity of the settlements, cutting off every straggler whom they met, and watching for an opportunity to surprise a village, they created more general alarm than they could have done, had they acted in concert on some open enterprise. Agriculture was necessarily abandoned, and the frontier men were obliged to confine themselves and their families to the stockades and garrison-houses.

To restore confidence to the settlers, and to curb the Indians by the establishment of a strong fort in the centre of the territory, which formed their field of operation, became an object of paramount importance. Orders to this effect had been received from England, and late in the summer the governor prepared to carry them into execution.

A site was chosen on a point of land projecting into Pemaquid river, and so near the mouth, as to command all access by this stream into the interior of the country. The river at this place is about forty rods wide, and the tides rise from fourteen to sixteen feet. Andros had caused a stockade fort to be erected on the spot, but the Indians had destroyed it in 1789.

In August, Governor Phips, attended by Major Church and four hundred and fifty men, embarked at Boston, and taking Falmouth in his course, to obtain some large guns, arrived at Pemaquid.

The fort was constructed in a quadrangular form, and the walls were built of stone. It was named Fort William Henry. Leaving Captains Wing and Bancroft, with two companies, to finish the works, Sir William despatched Major Church with the greater part of the troops to Penobscot, in search of the enemy, and returned himself to Boston. Church succeeded in taking only five of the enemy, and in burning the Indian town at Taconet.

Great discontent was caused by the building of Fort William Henry, and by the largeness of the sum expended. So far as the murmurs related to the construction of any fort, they were unreasonable, for such a measure was necessary for the protection of the frontiers. But it was said, that little judgment was shown in the choice of a site, and in the mode of building. The fort defended only one harbor, and that was not a very important one, and did not afford a convenient centre of operations ; as it was, it disturbed somewhat the operations of the French, who sent an expedition against it before the close of the year ; but the place was found to be stronger than they had expected, and they retired without risking an assault.

The appointment of Phips as captain-general of Connecticut and Rhode Island was the cause of some trouble. The object in giving him the command of the military in places where he held no civil authority seems to have been, that the

united forces of the New England provinces might act with greater unanimity and effect against the common enemy. But no law of these two governments required the submission of the people to an officer from Massachusetts, and the commission of Phips, in this particular, was rendered void. He visited Rhode Island, in the first year of his government, to regulate the militia there; he divided the colony into several regiments, and gave to Colonel Stanford, who was commander-in-chief, a number of commissions for the officers to be appointed. But most of these refused to take the commissions; and, as the people would pay no regard to them, the matter was allowed to pass over without notice.

At the elections in May, 1693, the people had an opportunity of testifying the opinion, which they entertained of Phips and his government. Ten of those, who had been counsellors the year before, having been nominated to that office by Mr. Mather and Sir William, were left out, and others were put in, some of whom were on bad terms with the governor. He refused his consent to the choice of Mr. Cooke, who had been one of the colony agents in England, and had opposed his own nomination. But Cooke was much esteemed by the people; and it would have been more politic in the governor, to suffer his presence at the council-board, than to endanger his

own popularity, by putting a negative on the election.

It was evident, that Sir William's favor with his countrymen had declined. The dislike of the new charter, and of those who were concerned in obtaining it, together with the weight of taxes caused by the prosecution of the war, account but partially for this result. The governor's hasty temper led him into difficulties, which his real goodness of heart could not induce the people to overlook.

The project of another attempt upon Canada had been entertained during the winter, and repeated applications to the English government had at last induced the ministers to promise assistance. Sir Francis Wheeler, the English admiral in the West Indies, arrived in the early part of the summer, bringing with him a body of troops sufficient, when united with the New England forces, to capture Montreal and Quebec. Phips was to head the provincial troops, but to act under the orders of Wheeler. Unluckily, the arrangement was made in England, and notice of it was not conveyed to the province in time for the necessary preparations.

The plan was wholly defeated by a disease, which broke out in the fleet while in the West Indies, and proved so fatal, that by the 11th of June, when the admiral arrived at Boston, he had

buried thirteen hundred out of twenty-one hundred sailors, and eighteen hundred out of twenty-four hundred soldiers. The arrival of the fleet introduced the disease into the town, where it made greater ravages than any contagious disease, which had ever visited them before, and alarmed many families so much, that they withdrew to the country.

Thus exposed for another season to the ravages of the French and Indians, the provincial government made such preparations as they were able, in their own defence. Three hundred and fifty men were levied, and put under the command of Converse, who received a major's commission, in consideration of his good conduct the year before. Being informed of a party of Indians who were lurking in the woods near Wells, he surprised and killed the greater part of them, in retaliation for a family, whom they had murdered a short time before, at Oyster River. He then embarked for Pemaquid, and passing up Sheepscot river, marched through the woods to Taconet, which he found deserted by the Indians. Thence he repaired to Saco, and laid the foundations of a fort, which was afterwards finished by some of his officers, and proved of great service in the war.

These were the only military operations of the season. The Indians were by this time discouraged at the length of the war, and by the fact that the

French were not able to afford them so much assistance as formerly. They also feared an attack from the Five Nations, who espoused the cause of the English. A French missionary, who resided among them, used all his endeavours to prevent an accommodation, but he was unsuccessful.

The provincials, on their side, were no less eager to be rid of the war. The Indian sachems came to Pemaquid, the officers of which fort had been empowered to make an agreement, and on the 11th of August a treaty was signed.

While the peace continued, Sir William took all proper measures to conciliate the entire goodwill of the Indians, and induce them to break off all connexion with the French. In the summer of this year, he undertook a voyage to Maine for this purpose, and for regulating the trade. He took with him Nahauton, an Indian preacher, intending to leave him among them, that he might teach them Protestant Christianity. But the event showed, what might have been expected in the outset, that the diligence of the French Jesuits had been such, as to confirm the savages in some rude notion of the Roman Catholic doctrine, and to ally them inseparably with the people, who professed that faith. The sachems came to Pemaquid, however, received presents, expressed their satisfaction, and made large promises of future fidelity; with how much sincerity was shown by the renewal of the war in less than a year.

The governor visited Pemaquid again in the course of a few months, when he had an interview with Madockewandos, one of their principal sachems, and obtained from him the grant of a considerable tract of land.

For the few remaining months of Sir William's administration, we hear little of him, except from the unfortunate controversies with individuals, in which he became involved. His favor with the people had so much declined, that, from the mere unpleasantness of his situation, he became peevish, irritable, and jealous of encroachments upon the dignity of his office. The first quarrel with a private person, though it arose from a controversy, in which Phips took the popular side, had a material effect in diminishing the respect, which the people were accustomed to pay to their governor.

The maritime affairs of the province had never been clearly regulated by the government of the mother country. The several governors were enjoined, under severe penalties, to see that the trade and navigation acts were duly observed ; but though the admiralty jurisdiction was expressly reserved to the King, no admiralty officers had been regularly appointed, and no court established. Phips maintained, that, by virtue of his commission as vice-admiral, he had a right to sit as judge ; and he ordered several prizes, which had been taken by a privateer among the Leeward Islands, to be brought before him for condemnation.

It had been usual for the governor to appoint a naval officer, and ship-masters entered and cleared their vessels with him. Sir William appointed a Mr. Jackson to this office. But in the course of the year 1693, Mr. Brenton, a young gentleman of good family, was commissioned by the King, as collector of the port of Boston, though no custom-house had as yet been established. The people resented this appointment, and complained that it only burdened them with unnecessary and unreasonable fees. They questioned Brenton's authority, and still continued to enter and clear their vessels with the naval officer, in which course they were supported by the governor.

In the spring of 1694, a vessel laden with fustic from the Bahama Islands arrived at Boston. No bond had been given for the cargo, and the collector consequently seized both ship and goods. The fustic had been purchased by Colonel Foster, a merchant of Boston and a member of the Council, who, loth to part with his bargain, complained to the governor. He immediately interposed, and sent an order to the collector to release the goods. When Brenton refused to obey, Sir William went to the wharf where he was, and after some altercation, actually chastised him with his own hands. The vessel and goods were then taken from him, and delivered to the owners.

Another private quarrel of the governor occur-

red in the same year, and under similar circumstances. Some disagreement had arisen between him and Short, the captain of the *Nonsuch* frigate, in which he had made his last voyage from England, and which was now lying in the harbor of Boston. Short complained, that the proceeds of a prize, which had been taken on the voyage, had been unfairly distributed, and that he and his men had been defrauded of their proper share. Phips was exasperated by such a charge, and the power vested in him by his commission enabled him to manifest his dislike. The captains of the men-of-war on the colony station were then required to follow the instructions of the governors, who had power even to suspend them from office, in case of great misdemeanors.

Information had been received, that a French man-of-war was expected at St. John's, and the governor ordered the *Nonsuch* frigate thither, to intercept it. An attempt seems to have been made to deprive Short of the command, at least for this voyage, and to leave the vessel in charge, either of the officer next in rank, or of a captain appointed by Sir William. But Short successfully resisted this attempt, and, incensed by such treatment, probably used no great despatch in the service for which he was sent. At any rate the French vessel had sailed before he arrived, and he returned without effecting any thing. Phips

warmly accused him of negligence and cowardice, and one day meeting him in the street, "warm words passed, and the governor at length made use of his cane, and broke Short's head." He then caused him to be arrested, sent to the castle, and thence on board a merchant vessel, giving the master a warrant to carry him as a prisoner to England.

By some accident, the vessel was compelled to put into Portsmouth, and Sir William, now convinced that he had acted too hastily, proceeded thither, and ordered the master of the vessel to return the warrant, which he tore in pieces. Short was set at liberty, and Sir Francis Wheeler, who arrived at Boston soon afterwards, sent for him and carried him to England, where he obtained the command of another ship.

These two quarrels were as impolitic, as they were undignified. They injured the respectability of the office, and impaired the popularity of the man. Both in the Council and the Lower House, the opponents of the governor, who were far more active than his friends, had now definite reasons for dissatisfaction, and they were not backward in using them, to prejudice the minds of the people, and to give weight to the representations against Phips, which they sent to their English correspondents. On the other hand, his friends in the House of Representatives proposed an

address to the King, praying that the governor might not be removed ; but, though they mustered all their strength, out of fifty members present, twenty-four voted against the proposition.

About this time, it so happened, that the friends of Phips, in their anxiety to strengthen the hands of the government, really secured an important privilege to the people. The qualifications for membership of the House had never been clearly determined, and some of the smaller towns, from the want of proper candidates among themselves, had adopted the practice of choosing gentlemen from Boston to represent them in the General Court. The governor was less popular in the town than the country, and most of these non-resident members belonged to the opposition. A bill was therefore introduced, and pressed through both Houses, that in future none but residents should be eligible as representatives. This measure excited some murmuring at the time, for it excluded a few of the most respectable and influential members ; but it was soon considered as establishing an important safeguard for the rights of the people.

It was now generally understood, that Sir William's administration was drawing to a close. Besides his open enemies, he had many lukewarm friends, who did much to injure his interests. Stoughton, the lieutenant-governor, was very cold

towards him, and Mr. Dudley, a former governor of the province, who desired to recover the office, was pressing his suit in London. Short and Brenton had both preferred their complaints to the King, and the Lords of the Treasury together with the Board of Trade requested that the governor might be immediately displaced. The King refused to condemn him unheard, but ordered him to leave the province, and come to England to defend himself. Sir William accordingly left Boston, on the 17th of November, 1694.

On his arrival, he was arrested by Dudley and Brenton in actions of twenty thousand pounds' damages. What were the grounds of such a proceeding on the part of Dudley, it is impossible to tell. He had not been in the province recently, and it is difficult to see how Phips could have injured him in London. The action was probably brought as a mere stroke of policy to increase the difficulties under which Phips labored, and embarrass the application for his return. Sir Henry Ashurst became his bail, and remained his friend to the last. It was urged in his defence, that Parliament had established no custom-house in Boston, but had recognised the existence of a naval office. No defence was necessary in the case of Captain Short; for, owing either to his absence from the country, or his forgetfulness of the provocation he had received, he had exhibited no articles of complaint.

Cotton Mather asserts, that Sir William's answer to the charges brought against him was triumphant, and that he received assurances of being restored to his government. But this is hardly probable. Though no proceedings strictly illegal may have been proved against him, the King would hardly desire to restore to an important station a man, who had so far forgotten the dignity of his office, as to cane a commissioned officer.

Unable to remain idle under any circumstances, Phips now engaged in the prosecution of two several designs. The one was a scheme for supplying the English navy with timber and naval stores from the Eastern parts of New England. The conception was plausible, and no person was better fitted than himself to carry it into execution.

The other project was of a more doubtful character, being nothing else than to return to his old business of fishing for shipwrecked treasure. He had heard, that the ship, which had on board the Spanish governor Bobadilla, with a large amount of gold and silver, had been cast away somewhere in the West Indies. The Duke of Albemarle's patent for all such wrecks had now expired; but he proposed to have it renewed in his own person, and to try if fortune would be as favorable, as on the former expedition.

But the execution of these designs was suddenly

cut short. About the middle of February, 1695, he found himself indisposed with a cold, which confined him to his chamber. It resulted in a malignant fever, which caused his death on the 18th of the month, in the forty-fifth year of his age. He was honorably interred in the church of St. Mary, Woolnoth. Sir William left no children. Spencer Phips, whose name occurs frequently in the subsequent history of the colonies, was his nephew, whom he had adopted into his family. His widow married Peter Sargent, who was elected to the Board of Counsellors in Massachusetts, in 1702.

Hutchinson sums up the character of Sir William Phips in a few words. "He was an honest man; but by a series of fortunate incidents, rather than by any uncommon talents, he rose from the lowest condition in life to be the first man in his country."

Perhaps a candid review of the principal events in his career would prove this judgment to be too severe. Fortune befriended him only when he had earned her favors by ceaseless industry and the most indomitable perseverance. He succeeded in enterprises so hopeless at first sight, that men of sober judgment would never have engaged in them, and after failures and discouragements, which would have caused persons of ordinary prudence to give up the attempt in despair. He was better fitted to execute the orders of others, than to issue orders himself; and the reputation, which he lost

as a rash and unskilful commander, he might have gained as an active and daring subaltern. He was unfit to lead an army, or to govern a province, and the chance, which placed him in such situations, was an unlucky one ; but a better education might have qualified him for either station, as his natural endowments were perhaps sufficient for both.

He enjoyed a large fortune, acquired solely by his own exertions ; but he was neither purse-proud, parsimonious, nor extravagant. Far from concealing the lowness of his origin, he made it a matter of honest pride, that he had risen from the business of a ship-carpenter to the honors of knighthood, and the government of a province. Soon after he was appointed to the chief magistracy, he gave a handsome entertainment to all the ship-carpen-ters of Boston ; and, when perplexed with the public business, he would often declare, that it would be easier for him to go back to his broad-axe again. He was naturally of a hasty temper, and was frequently betrayed into improper sallies of passion, but never harbored resentment long. Though not rigidly pious, he reverenced the offices of religion, and respected its ministers. He was credulous, but no more so than most of his better educated contemporaries. The mistakes, which he committed as a public officer, were palliated by perfect

uprightness of intention, and by an irreproachable character in private life; for even his warmest opponents never denied him the title of a kind husband, a sincere patriot, and an honest man.

**LIFE  
OF  
ISRAEL PUTNAM;  
BY  
OLIVER W. B. PEABODY.**



## ISRAEL PUTNAM.

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### CHAPTER I.

*His Birth and Education.—Becomes a practical Farmer.—Singular Adventure in killing a Wolf.—Enters the Army a Captain of a Company of Rangers.—Engages in the War against the French and Indians on the Canada Frontiers.*

OUR history, from its beginning until a comparatively recent time, gives us abundant instances of men, in whom the deficiencies of education have been supplied by natural resource and energy. Thrown into novel situations, where instruction and experience would sometimes have availed them little, they have yet accomplished all that any exigency could require. Some of them were called to lay the foundations of civil institutions in the wilderness ; some to subdue a fierce and unrelenting savage foe ; some to encounter the hostility of other nations, as well as of that which they regarded as their own. Privation and suffering, in

every form in which they commonly exhaust the frame and overcome the spirit, were to attend them often by the fireside, and always in the engagements of life. These evils, if evils they were which led to immortality, were encountered with manly and heroic firmness; and it must needs be, that the personal history of men, exhibiting the vigor and flexibility of character required by the circumstances in which they were thus placed, should be full of freshness and diversity. Without pretending to claim for General Putnam the very highest rank among such individuals, we may yet venture to assign him an honorable place. His biography has been already written by a friend and fellow-soldier, who gathered from his own lips a portion of his history;\* and we shall freely avail ourselves of the materials, which have been thus collected, in connexion with such as have been gained from other sources, in attempting to present a sketch of the life of one, who stands forward as a prominent example of some of the most striking traits of the genuine American character.

ISRAEL PUTNAM was born at Salem, in Massachusetts, on the 7th day of January, 1718. His grandfather with two brothers emigrated from the

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\* "An Essay on the Life of Major-General Israel Putnam; addressed to the State Society of the Cincinnati in Connecticut. By DAVID HUMPHREYS."

South of England, and was one of the earliest settlers of that ancient town. His father was a farmer, and the son was destined to the same pursuit, for which no great extent of education was then believed to be required. The arts of reading, writing, and a tolerable proficiency in arithmetic, were the only attainments to be acquired in the common schools; and the higher institutions, or "the schools of the prophets," as they were called, were appropriated to the candidates for the liberal professions. We should be slow to censure our ancestors for this, before we ascertain how far the state of the fact is altered at the present day; for their efforts in the cause of education, considering their circumstances and condition, have not yet been excelled by any of their sons.

It is plain, then, that the literary advantages of young Putnam could not be very great; and, such as they were, it is not likely that this species of improvement was uppermost in his mind. His constitution of body was firm and vigorous; and he early displayed that insensibility to danger, which was so strikingly exhibited in his subsequent career. It was the custom of the young men of that day to pursue athletic exercises, of which running, leaping, wrestling, and pitching the bar were the favorite ones, and were regarded as the surest tests of strength and skill; and in these

manly sports, which have fallen of late into almost entire neglect, young Putnam was surpassed by none of his competitors. But the research of his biographers has redeemed from oblivion scarcely a single incident in the youthful history of one, then quite unknown to fame ; and the exploits of childhood are rarely of sufficient moment to compensate for the labor of inquiry. There is one, however, characteristic enough to deserve a passing notice. On Putnam's first visit to Boston, he was treated by a boy of the metropolis with the sort of courtesy, with which rustic boys are not unfrequently welcomed. His antagonist was twice as old and large as himself; but he requited the attention with a sound beating, to the entire satisfaction of a numerous body of spectators.

In the twenty-first year of his age, Mr. Putnam was united in marriage to the daughter of Mr. John Pope, of Salem. After her death, which occurred in 1764, he married a Mrs. Gardiner, who died in 1777. About the time of his first marriage he removed to Pomfret in Connecticut, where he purchased a tract of land, and entered upon the occupation of a farmer. At first he met with some of the discouragements, which are apt to render the life of a settler a school of no gentle discipline ; but in the course of a few years he became an enterprising and successful cultivator, and was rewarded by a fair measure of prosper-

ity. In this quiet retreat he remained till the opening of the Seven Years' War presented him with a broader field of action.

It would be quite unpardonable, in writing the life of Putnam, to omit to notice his victory over the she-wolf, at Pomfret; the story of which is familiarly known to every schoolboy in the country, and is very minutely detailed by his principal biographer. This renowned animal had for some years been the scourge and terror of the farmers, whose pursuit of her had been altogether fruitless; though they had succeeded in destroying her young, whom she brought in winter with her from the forest, to bring up in her own arts of marauding. In an evil hour for her own safety, she made an onset upon Putnam's farm-yard. Seventy of his sheep and goats were killed, and many others wounded, in the course of a single night; and it was determined to resort to decisive measures. Several of the farmers, among whom was Putnam, accordingly entered into an offensive alliance against the common enemy; the condition of the compact being, that the pursuit should only cease with the destruction of the foe.

Fortunately her track was easily recognised, a portion of one of her feet having been lost by an accidental intimacy with a trap. Her pursuers were thus enabled to trace her course to Connecticut River, and thence back again to Pomfret,

where she took refuge in a cavern, near the residence of Putnam. The place was selected with great judgment to withstand a siege ; as very few persons beside Putnam himself could have been persuaded to reconnoitre the position of its inmate. It is entered by an aperture about two feet square, on the side of a huge ledge of rock. The pathway descends fifteen feet obliquely from the entrance, then pursues a horizontal direction for ten feet, and thence ascends gradually about fifteen feet to its extremity ; being in no part wider than three feet, nor high enough to permit a man to stand upright. The access to the interior is rendered very difficult in winter, by the accumulation of ice and snow.

No time was lost by the confederates in devising various methods of attack. A competent force of dogs was collected, with such munitions as were thought suited to this novel warfare. But the hounds that entered the cave retired in great disgust, and could not be prevailed on to repeat the experiment ; the smoke of blazing straw was ineffectual ; and the fumes of burning brimstone, which were expected to prove quite irresistible, wasted their sweetness in vain. This system of annoyance was continued through the day, until a late hour in the evening, when Putnam, weary of the unsuccessful efforts, endeavored to persuade his negro servant to go into the cave ; a propo-

sition which was declined; and his master, after somewhat unreasonably reproaching him with cowardice, resolved, against the earnest remonstrance of his neighbors, to undertake the enterprise himself.

He first procured some birch bark, to light his way and intimidate the wolf by its flame; then threw aside his coat and vest; and, causing a rope to be secured to his legs, by which he might be drawn out at a concerted signal, set fire to his torch and groped his way into the cavern. At the extremity he saw the wolf, who welcomed her unexpected visitor with an ominous growl. His examination being now completed, he gave the appointed signal; and his companions, supposing from the sounds within that the case must be an urgent one, drew him out so precipitately, that his clothes were torn to rags, and his body sorely lacerated.

He now provided himself with a musket, and bearing it in one hand and a lighted torch in the other, proceeded a second time upon his perilous adventure till he drew near the wolf. Just as she was on the point of springing, he took deliberate aim and fired; then, stunned by the explosion and almost suffocated by the smoke, he was again drawn out as before. After a brief interval, he entered the cavern for the third time, applied his torch to the wolf's nose to satisfy himself that her

repose was not affected, and, seizing her by the ears, was drawn forth with his prize, to the infinite satisfaction of the party.

This story is not without value, as an illustration of its hero's character. The life of a New England farmer is not usually very fruitful of adventure; nor is there any other incident on record relating to Putnam before the time, when he exchanged his occupation for a less pacific one. One may readily conjecture, that the tranquil pursuits of agriculture could hardly satisfy the ambition of a spirit like his, always most at home in the midst of perilous adventures; and that he must have exulted in the opportunities of acquiring fame and honors, which were afforded by the opening of the great French war, in 1754.

The causes of this eventful struggle belong too closely to the province of history to be required to be stated here. There was a general disposition among the people to prepare for some decisive measures in the following spring. It was with this view, that the memorable plan of the union of the Colonies was projected and matured; but as this, from various causes, proved ineffectual, the arrangements for the campaign were not completed until the arrival of General Braddock in this country, early in 1755. A convention of the several governors was held at his suggestion early in that year, by which it was resolved that three indepen-

dent expeditions should be undertaken. The first was destined against Fort Duquesne, and was conducted by General Braddock in person ; the second, at the head of which was Governor Shirley, against Forts Niagara and Frontenac ; and the reduction of Crown Point was the object of the third, which was composed wholly of colonial troops, under the command of Sir William Johnson. A body of troops was to be levied in Connecticut to serve in this last expedition, and the command of one of the companies composing it was bestowed on Mr. Putnam. His personal popularity rendered it easy for him to obtain the best recruits, and the regiment with which he was connected joined the army, near Crown Point, at the beginning of the campaign.

Throughout the war, very important services were rendered by the various corps, distinguished by the name of Rangers. They acted independently of the line of the army, and were employed in executing many perilous duties ; reconnoitring the positions of the enemy, serving in the capacity of guides, surprising detached parties, and obtaining prisoners, in order to gain intelligence, by force or stratagem. Among the other offices they were expected to perform, were those of destroying the houses, barns, barracks, and batteaux of the French, killing their cattle, and way-laying their convoys of provisions. They ren-

dered the most valuable aid as scouting parties to watch the movements of the enemy, of which no accurate intelligence could be procured but with the greatest hazard, the country being full of wandering and hostile Indians.

It is obvious, that a mode of life like this required the utmost prudence, sagacity, and alertness, and must have afforded abundant opportunities for wild and difficult adventure. In the Journals \* of Major Rogers, the celebrated New

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\* The first part of this work, which purports to contain an account of the "several excursions made by the author under the generals who commanded upon the continent of North America during the late war," was printed in London in 1765. It presents rather copious sketches of the personal services of the writer, though with less reference to the general operations of the several campaigns, than the reader at this day could desire; but it is by no means destitute of interest; and a work can hardly be regarded as a fair subject of criticism, which was written "not with science and leisure, but in deserts, on rocks and mountains, amidst the hurries, disorders, and noise of war, and under that depression of spirits, which is the natural consequence of exhausting fatigue." Very few notices are to be found in it, at any length, of the prominent individuals, who acted in concert with Major Rogers; the name of Putnam is rarely mentioned, and never with any comment indicating that the least importance was attached by the author to his services. The trifling incident of the preservation of his life by Putnam, is not once alluded to.

A work, published in 1831, in Concord, New Hamp-

Hampshire partisan, are preserved the regulations drawn up by himself for the government of the Rangers under his command; and one needs only read them to be convinced, that it was a service in which only the bold and resolute could be expected to engage. We are not informed whether the corps of Putnam were known from the outset as Rangers; it is very probable that they were so; as they were employed almost exclusively in that capacity, and appear to have been soon distinguished by that name. No service could have been better suited to the character and taste of Putnam.

The campaign of 1755, though distinguished by the stain upon the British arms at Braddock's overthrow, and the victory of the Provincials over Dieskau near Lake George, was not a long one, and afforded less than usual scope for the exertions of the Rangers. A similarity in some respects of

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shire, and entitled "Reminiscences of the French War," purports to contain among other matter, this Journal of Rogers; but the editor, without apprizing his readers of the fact, has mutilated the original in a very remarkable manner. Hardly a single sentence is unaltered, and it is quite curious to compare a page of Rogers' own composition with one which has undergone the scalping-knife of the New Hampshire editor. We doubt whether the proceeding is to be justified under any circumstances; but it becomes unpardonable when it is attempted without the slightest intimation to the reader.

character and disposition produced an intimacy between Putnam and Rogers ; and they frequently acted in concert to reconnoitre the positions of the enemy, surprise their advanced pickets, and obtain intelligence of their purposes and movements.

In one of their excursions, it was the fortune of Putnam to preserve the life of Rogers. Both these officers had been detached with a party of light troops from Fort Edward, to ascertain the state of the fortifications at Crown Point. To approach them with their whole force would have made it difficult to guard against discovery, while the number of straggling Indians in the neighborhood rendered it scarcely less dangerous to advance without support. They, however, left their men concealed behind a willow thicket, and went themselves sufficiently near the works to procure the information they desired. It was now about the hour of sunrise, when the soldiers began to issue in such numbers from the fort, that the partisans found no opportunity to rejoin their men without detection. In the course of an hour or two, a soldier came directly to the spot where Rogers lay concealed at a little distance from Putnam, and, on discovering him, called for aid to an adjacent guard, attempting at the same time to seize Rogers's fusee with one hand, and to stab him with a dirk which he held in the other. Putnam perceived the imminent danger of his associate,

and, being unwilling to alarm the enemy by firing, ran up, and struck the Frenchman dead before him with a single blow from his fusee. The outcry of the soldier had already alarmed the guard; but the partisans succeeded in rejoining their troop, and in returning without loss to their encampment.

By the terms of their enlistment, the colonial troops were engaged to serve only during the campaign; but the commission of Captain Putnam was renewed, and he entered again on duty in the spring of 1756. The general military operations of this year were less fortunate than those of the preceding one. The advantage of many expensive and laborious preparations was wholly lost by the inaction of the British generals. Oswego, an important fortress, was captured by the French, and no attempt was made to dispossess them of their outpost at Ticonderoga. A very different result would probably have been exhibited, had the operations of the army been conducted by Provincial officers, who were thoroughly conversant with the country, and the foe with whom they would have had to deal; points, of which the British generals appear to have been profoundly ignorant. It is a relief to turn from the detail of their misconduct, to the personal adventures of the more deserving officers, who acted under them.

Captain Putnam was directed to reconnoitre

the position of the enemy at the Ovens, near Ticonderoga. He was accompanied in this enterprise by Lieutenant Robert Durkee, a gallant officer, who afterwards encountered the severest fate, under which humanity can ever be called to suffer.\* The two partisans proceeded on their way, until they came near the enemy. It was the custom of the British and Provincial troops to set fires by night in a circle round their camp. The French, on the contrary, more wisely placed them in the centre, so that their sentinels were screened from observation by the darkness.

Putnam and Durkee were unfortunately not aware of this usage, and were creeping slowly on their hands and knees, in order to approach the fires, when they were confounded at finding themselves in the midst of the camp of the enemy, by whom they were discovered and fired upon. Durkee received a bullet in his thigh; but there was no time to be lost, and they began an expeditious retreat. Putnam led the way, and in a few minutes fell head foremost into a clay-pit, followed by Durkee, who had kept closely at his heels. Supposing his companion in the pit to be one of

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\* He was an officer in the revolution. At the battle of Wyoming, in 1778, he was wounded and made prisoner by the Indians; by whom he was burned at the stake, and treated during his expiring moments with the most savage cruelty.

the pursuers, Putnam had raised his arm to stab him, when he recognised Durkee's voice. Both then rushed from their retreat, in the midst of a shower of random bullets, and threw themselves behind a log, where they spent the remainder of the night. On examining his canteen, Putnam found it pierced with balls, and its contents entirely gone; and next morning at day-light, he discovered that his blanket was sorely rent by fourteen bullet-holes.

On another occasion, a convoy of baggage and provisions was intercepted by six hundred of the enemy at Halfway Brook, between Fort Edward and Lake George. The plunderers retreated with their booty, having experienced little interruption from the troops, by which the convoy was escorted. When the news of this disaster was received at the camp, Captains Putnam and Rogers were ordered in pursuit. They were directed to take with them one hundred men in boats, furnished with two wall-pieces, and the same number of blunderbusses. With these they were to proceed for a certain distance down Lake George, and thence over land to the Narrows, to cut off the enemy's retreat.

Shortly after they had reached the designated spot, they saw from their place of concealment the French batteaux, laden with the plunder of the convoy, sailing into the Narrows, entirely unsuspicous of danger. They await in silence the

approach of the batteaux ; at the critical moment, they pour upon them a close and most destructive fire ; many of the boatmen fall, and several of the batteaux are sunk. A strong wind sweeps the remainder with great rapidity through the passage into South Bay, or the destruction would have been complete. They carry to Ticonderoga the news of their disaster, and a detachment is instantly sent to intercept the Provincials ; who, anticipating such a movement, have in the mean time hurried to their boats, which they reach before the close of day.

Next morning they set sail, and, at Sabbath-day Point, meet the detachment of the French, consisting of three hundred men, advancing in boats with the expectation of an easy victory. Not a musket is discharged until they come within pistol shot ; then the enemy are thrown at once into confusion by the artillery, aided by a close fire of musketry. The carnage becomes dreadful ; of twenty Indians in one of the canoes, fifteen are killed, and very many are seen to fall overboard from others ; while, on the side of the Provincials, only one is killed and two others are wounded. No farther attempt is made to obstruct the retreat of the Provincials, who return in safety to the camp.

Late in the same season, General Webb, who commanded at Fort Edward, sent out Captain

Putnam to procure a prisoner ; the usual and very compendious method of learning on the best authority the motions of the enemy. He concealed his men near the highway leading from Ticonderoga to the Ovens ; but these valiant gentlemen thought fit to ascribe his caution to the influence of fear, and, as there was no enemy in sight, were with much difficulty induced to remain under shelter. Presently an Indian passed by, and at a little distance behind him a Frenchman ; and Putnam, calling on his men to follow, sprang to seize upon the latter, overtook him and ordered him to surrender. His men were now convinced of the advantage of concealment, and disregarded his order ; and, as Putnam was the only person in view, his intended captive preferred to run the hazard of resisting him. Putnam levelled his piece, but it missed fire, and he retreated followed by the Frenchman, in the direction where his men were posted ; but the other, falling on this unexpected ambuscade, changed his course without delay, and effected his escape. The men, whose conduct had been thus discreditable, were dismissed with disgrace ; and Putnam soon accomplished his object with other aid. The incident is worthy of relation, only as it shows the nature of the tasks imposed upon an active partisan, and the hazard to be encountered in performing them.

The character and services of Putnam had now become generally known ; he was found to unite with a total insensibility to danger, a caution and sagacity, which gave him the command of his resources at the moment when they were most required. Nor could any service be better adapted to the exhibition of these qualities, than that in which he was engaged ; though it was unfortunately in a sphere too limited, to secure for him a place in history. He was endeared to the soldiers by the cheerfulness with which he shared their perils and privations, and the gallantry, which suffered none to go where he did not himself lead the way ; to his superior officers, by the energy and promptness with which he executed their commands ; and he began to rise in the esteem of the public generally, as one who was destined to become distinguished in a broader field of action.

## CHAPTER II.

*Raised to the Rank of Major.—Various Adventures in the War.—Capture of Fort William Henry.—Putnam stationed near Fort Edward.—Encounters the Enemy at South Bay.—Expedition against Ticonderoga.—Death of Lord Howe.*

IN 1757, the legislature of Connecticut conferred on Putnam the commission of a major. The Earl of Loudoun, one of the most incompetent British generals who had commanded in the colonies, was then at the head of the military forces in this country. He had arrived at Albany in the summer of the preceding year; but the capture of Oswego by the French had induced him to suspend offensive operations, and to think only of guarding against further loss. By the next spring, the generous efforts of the colonists enabled him to take the field with a numerous and effective force; and it was expected, not without reason, that he should open the campaign in the direction of Canada with some decisive blow. But the people were not yet fully acquainted with the character of their military chief. About midsummer, they were somewhat surprised to learn that he had

sailed for Halifax with six thousand of his troops. It was his intention there to join a reinforcement of five thousand men, who had lately arrived from England under the command of Lord Howe, and to attempt the reduction of Louisburg in Cape Breton; but, learning that the garrison of that place had been augmented by an armament from France, he returned to New York and reposed upon his laurels.

While the British commander was prosecuting his voyage of discovery, the condition of Fort William Henry, then a frontier post, was such as to invite the assault of the enemy. This ill-fated fortress, the name of which still awakens melancholy recollections, was situated at the southwestern extremity of Lake George. It was a structure of no great strength, on a small eminence, which rose gradually from the waters of the lake. Its garrison at this time consisted of about three thousand men; and, as an additional security, General Webb was stationed about fifteen miles distant at Fort Edward, with a force considerably larger.

The Marquis de Montcalm, the French commander, having collected about eight or nine thousand men, including a large body of Indians, appeared before Fort William Henry on the third of August, with a summons to surrender. In his letter to the commanding officer of the garrison, he urged the capitulation by considerations of human-

ity, declaring that his power to restrain the Indians would be lost, after the blood of any of them should be shed. No written answer was given to the summons ; a verbal reply was returned by the bearer, that the fort would be defended to the last extremity.

Another sad illustration was yet to be afforded of the incapacity of generals, and a still more melancholy one of the atrocities of savage warfare. Just before the siege began, General Webb, accompanied by Major Putnam and two hundred men, went to Fort William Henry, to ascertain the state of its defences. While the General was thus engaged, Major Putnam offered to go with five men to Northwest Bay, sending back the boats to prevent detection, and obtain accurate information respecting the situation of the French at Ticonderoga.

This proposition was rejected as too hazardous. He was, however, permitted to undertake the enterprise, with eighteen volunteers. They immediately embarked in three whale-boats, and set forward on their expedition. Before they arrived at Northwest Bay, a large body of the enemy was discovered on an island. Leaving two of his boats, as if for the purpose of fishing, Putnam returned with the remaining one to communicate what he had seen. The general, whose valor was his least shining accomplishment, seeing the Major

make for the land with his force thus reduced, despatched a skiff to him with orders to come to the shore alone.

With some difficulty, he obtained permission to return in quest of his companions, and to make additional discoveries. He found his men in the place where he had left them, and immediately after encountered a large number of boats in motion on the lake, from the foremost of which he was enabled to escape only by the superior fleetness of his own. There was no longer any room for doubt, that this armament was destined against Fort William Henry ; and Putnam so informed the General, who ordered him to preserve strict silence on the subject, and to exact an oath of secrecy from his men.

In vain he endeavored to urge the necessity of meeting the enemy on the shore. "What do you think we should do here ?" was the discreet reply. Next morning, the general returned with his escort to Fort Edward, and detached a reinforcement to Fort William Henry. In twenty-four hours afterwards, the fortress was invested by the enemy.

During six days was it defended against a far superior force, provided with artillery. Express after express was in the mean time sent to Fort Edward for relief ; but, though the force of Webb had been increased by the addition of Johnson's

troops and the militia, he made not the slightest effort to avert its fate. Once, indeed, he yielded to the solicitations of Sir William Johnson, and permitted those, who would volunteer in the service, to march for its relief. The privilege was eagerly embraced by the Provincials, including Putnam's Rangers ; but scarcely had they begun their march, when the general's heart failed him, and they were ordered back. They returned with tears of indignation and sorrow.

General Webb believed his duty sufficiently discharged when he wrote to Colonel Munroe, the commander of the fort, advising him to surrender ; and it is a striking example of the danger of pusillanimity, that the indecision of this strangely inefficient personage was the direct cause of the subsequent disaster. When Putnam was a prisoner in Canada, he was assured by Montcalm himself, that the movement of the Provincials from Fort Edward had been reported to him by his Indian scouts, who represented them to be as numerous as the leaves upon the trees ; that the operations of the siege were suspended, and preparations for retreat were immediately made, when the news of their return encouraged him to persevere with greater vigor,

All expectations of relief were now at an end ; two of the largest guns of the fort had burst, and further resistance must be obviously unavailing ;

articles of capitulation were therefore signed, by which protection against the Indians was pledged to the garrison, and they were to be permitted to march forth with the honors of war.

The event which followed, and which was long known throughout the continent as the Massacre of Fort William Henry, can hardly be recited now without a thrill of horror. The troops began their march from the fortress. Just as the rear-guard issued from the gates, the whole body of the Indians fell upon them with the utmost fury, slaughtering them in cold blood. Great numbers were killed, and others were taken prisoners. No efforts were made by the French to put an end to these atrocities; no protection, demanded alike by honor and humanity, was given, until only a miserable remnant of the garrison was left.

Early the next day, Putnam, who had been sent out with his Rangers to watch the movements of the enemy, reached the scene of carnage, just as the rear-guard of the French were embarking on the lake. The barracks were still burning, and hundreds of human bodies lay half-consumed among the ruins. Those of more than one hundred women were scattered around, torn and mutilated in a manner which no language is adequate to tell. One may conceive with what feelings the generous and warm-hearted soldier must have looked upon a scene like this. As we read the dark and bloody

tale, we almost pardon the stern vengeance with which our fathers strove to crush so merciless a foe ; but what a picture does it give of modern civilization, that the most enlightened nations hesitated not to employ these demons as the instruments of war ?

General Lyman soon after this took the command at Fort Edward, and labored to strengthen its defences. With this view he employed a party of one hundred and fifty men to procure timber in its neighborhood, and stationed Captain Little at the head of a morass, about a hundred rods eastward from the fort, to cover them. This post was connected with the fort by a tongue of land, on one side of which was a creek, and the morass extended on the other. One morning at day-break, a sentinel saw what he imagined to be birds, flying swiftly from the morass over his head ; but he was enlightened as to the true genus of these feathered messengers, when he saw an arrow quivering in a tree, just by him. A body of savages had concealed themselves in the morass in the hope of surprising the party, and had resorted to this noiseless method of despatching the sentinel.

The alarm was instantly given ; the laborers fled towards the fort, and were furiously attacked by the Indians ; but their progress was arrested by the close and seasonable fire of Little's party,

which enabled such of the fugitives as were not wounded to reach the fort in safety. The situation of the small band, pressed as they were by an overwhelming force, became very precarious ; but the commander of the fort, instead of sending a detachment to their aid, ordered all the outposts to be called in and the gates to be closed.

Putnam was stationed with his Rangers on an island, near the fort, where intelligence soon reached him of the peril of Little and his party. Without the hesitation of an instant, they dashed into the water, and waded as rapidly as they could to the scene of action. On their way they passed so near the fort, that General Lyman called to them from the parapet, and ordered them peremptorily to return ; but Putnam made a brief apology, and, without waiting to ascertain whether it was satisfactory, hurried on with his men.

In a few minutes they were at the side of the little band of regulars, who gallantly maintained their ground ; then, at the command of Putnam, they rushed with loud huzzas upon the savages directly into the morass. The charge was completely successful ; the Indians fled in every direction, and were pursued with great slaughter until night-fall. Colonel Humphreys remarks, that all is not right in the military system, when the orders of superior officers are disregarded with impunity, and intimates that Putnam should have been sub-

jected to the discipline of a court-martial. Nothing of the kind, however, appears to have been attempted ; the general was probably content with the result, and cared not that his own conduct should be contrasted with that of those, who served him contrary to his will.

In the winter of this year, the barracks adjacent to the northwestern bastion of Fort Edward accidentally took fire. Within twelve feet of them stood the magazine, containing three hundred barrels of powder. By the orders of Colonel Haviland, who then commanded at this post, some heavy pieces of artillery were brought to bear upon the barracks, to batter them to the ground, but without success. Putnam reached the fort from his station on the island, while the flames were spreading fiercely in the direction of the magazine, and took his post on the roof of the barrack, as nearly as possible to the blaze. A line of soldiers was formed through a postern to the river, from which water was conveyed to Putnam, who threw it on the fire, standing all the while so near it, that his mittens were burned from his hands. He was supplied with another pair soaked in water, and kept his post.

Colonel Haviland, considering his situation to be too dangerous, urged him to descend ; but he replied that a suspension of his efforts would be fatal, and entreated to be suffered to remain ; and

the colonel, encouraged by his intrepidity, gave orders that nothing more should be removed from the fort, exclaiming, that if they must perish, all should be blown up together. The barracks began to totter; Putnam came down and took his station between them and the magazine; the external planks of this building were consumed, and there remained only a partition of timber between the powder and the flames; still he refused to quit his post, and continued pouring on the water until the fire was happily subdued.

He had contended with the flames for an hour and a half; his face, his hands, and almost his whole body were blistered; and, in removing the mittens from his hands, the skin was torn off with them. Several weeks elapsed, before he recovered from the effects of the exposure; but he was rewarded by the earnest thanks of his commander, and by the consciousness that, but for him, the fortress must have been in ruins.

A brighter day began to dawn upon the British arms in every quarter of the country, but the neighborhood of Lake George and Lake Champlain. There, the same fortunes which had hitherto attended them underwent no immediate change. The popular voice had overborne the royal will, and had compelled George the Second to receive Mr. Pitt as his prime minister. The name of this great man is more closely associated with

commanding energy of character, than any other in the history of England ; it made, as, in the eloquent language of Burke, it kept the name of his country respectable in every other on the globe. Nowhere was that name held in greater respect, and nowhere did it inspire more confidence, than in America.

He assumed the direction of affairs in the summer of 1757 ; and his attention was at once directed to the conduct of the war in this country. The colonies, justly appreciating his vigor and talent, renewed their generous but exhausting efforts to recruit the army for the next campaign ; and the extent of their exertions can only be understood, when it is considered that fifteen thousand men were supplied by Connecticut, Massachusetts, and New Hampshire, at a time when the resources of all were hardly equal to those of any one of them now.

Three expeditions were proposed to be undertaken ; Louisburg was the destination of the first, Fort Duquesne of the second, and Crown Point and Ticonderoga of the third. The results of the two first are sufficiently well known ; the course of our narrative will lead us into some detail respecting the last. Not even the ability of Pitt could immediately turn the current of adverse fortune, which had been flowing with so little interruption in the region, where the scene of our story has thus far been laid.

General Abercromby, who now assumed the chief command in this department, ordered Major Putnam to proceed with fifty men to South Bay in Lake George, in order to watch the motions of the enemy, and intercept their straggling parties. The detachment marched to Wood Creek, near the point where it flows into South Bay ; there, in obedience to Putnam's directions, they constructed a parapet of stone, thirty feet in length, on a cliff that overhangs the water ; securing it from observation by young pines, so disposed that they appeared to have grown upon the spot. Fifteen of the soldiers, who became unfit for duty, were sent back from this station to the camp.

Late in the evening of the fourth day since he occupied the post, Major Putnam was informed that a large number of canoes, filled with men, were slowly entering the mouth of the creek. All the sentinels were called in, and each man was stationed at the point where his fire would be most effective, receiving positive orders from Putnam to reserve it, until he should give the word. The moon was at the full, and every movement of the enemy was perfectly in view. The most advanced canoes had passed the parapet, when a soldier accidentally struck his firelock against a stone. Alarmed at the sound, those in the foremost canoes ceased to advance, and the whole were crowded in a body at the very base of the temporary fortification.

fication. The leaders consulted together, and apparently resolved to return into the Bay.

Just as they were changing their course, Putnam gave the word to fire, and it was obeyed with terrible effect ; hardly a shot failed to find its victim, amidst the dense mass of the enemy beneath, whose fire was wasted on an invisible foe. The carnage had continued for some time, when the enemy, perceiving from the fire that the number of their assailants must be small, detached a party to land below in order to surround them ; but the movement had been watched by Putnam, and the party was repulsed by twelve men, under the command of Lieutenant Durkee. During the whole night were the enemy exposed to the murderous fire from the parapet. At day-break, Putnam learned that a detachment had effected a landing at some distance below ; his ammunition also began to fail, and he gave the order to retreat.

It was afterwards ascertained, that the enemy consisted of a corps of five hundred men, commanded by the well-known partisan Molang ; and that more than half their number perished on that fatal night. Two only of Putnam's little band were wounded ; they were ordered to the camp under the escort of two other soldiers, but were pursued and overtaken by the Indians. Finding their own fate inevitable, they persuaded their escort to leave them, and quietly awaited the

approach of the foe. One of them, a provincial, whose thigh had been broken by a bullet, killed three of the savages by a single discharge of his musket. He was instantly put to death; but the other, an Indian, was made prisoner, and related these circumstances afterwards to Putnam, who encountered him in Canada.

While the party were effecting their retreat, they were fired on by an unexpected enemy. Putnam, who was never disconcerted, ordered his men to charge, when the leader of the other party, recognising his voice, cried out that they were friends. Friends or foes, replied Putnam, they deserved to perish for doing so little execution with so fair a shot; only one man had been wounded by the fire. Soon after, they were met by a corps detached to cover their retreat, and regained the fort on the following day.

The expedition against Ticonderoga, which has been already mentioned, was led by General Abercromby in person. His force consisted of sixteen thousand men, amply provided with artillery and military stores. On the morning of the 5th of July, 1758, they were embarked in batteaux, and began to descend Lake George, the whole array presenting a brilliant and imposing spectacle. They reached Sabbath-day Point at evening. Here they halted for a few hours, and then resumed their voyage, Lord Howe leading the van.

An officer, who had been sent to ascertain whether the proposed landing-place was unobstructed, returned at day-break with the information, that it was in possession of the enemy. Another place of landing was selected, and the troops were disembarked at mid-day on the 6th of July. Rogers advanced with his Rangers and drove the enemy before him, and the columns of the army began their march. Lord Howe led the centre, and Putnam was at his side. Some musketry was heard upon the left. "What means this firing?" said Lord Howe. "I know not, but with your Lordship's leave will ascertain," replied Putnam. He went, accompanied, in opposition to his earnest remonstrances, by Lord Howe with one hundred of the van. The firing proceeded from a portion of the advanced guard of the enemy, who had lost their way in the woods, while retreating before Rogers. They were soon encountered; and, at their first discharge, Lord Howe fell.

No heavier loss could well have been sustained. This young nobleman was in the prime of manhood, of fine address, full of amiable qualities, and eminent for manly virtue; his military fame was already high, and presented the most brilliant promise for the future. Never was a British officer so much endeared to the Provincial troops, or enjoyed more of the general esteem and confidence. He was regretted equally for what

he was, and what he was expected to become; but the man, over whom the tears of a people are shed, cannot be said to have descended immaturely to the tomb.

His death was avenged by his troops, who charged the enemy, and drove them from the field. Having accomplished this, they were returning to the lines, when they were fired upon, on the supposition that they were of the French army. Several men were killed; nor was the danger averted, until Putnam ran through the midst of the fire, explained the mistake, and thus secured his men from farther injury. He remained himself upon the field until evening, attending to the wounded French, and providing them with such alleviations as he had it in his power to bestow.\*

“The fall of Lord Howe,” says Rogers in his Journal, “appeared to produce an almost general consternation and languor.” Certain it is, that from that hour the enterprise wholly ceased to prosper. No progress was made during the next

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\* Colonel Humphreys assures us, in his *Life of Putnam*, that Major Rogers was sent next morning to bring off the wounded prisoners; “but, finding the wounded unable to help themselves, in order to save trouble, he despatched every one of them to the world of spirits.” We have no means of contradicting or confirming a story, which every reader would be glad to believe unfounded.

day ; but the principal engineer was sent forward to examine the defences of Ticonderoga ; he reported in favor of hazarding an attack without waiting to bring up the artillery, and the preparations were immediately made. This fortress stood on a peninsula in Lake Champlain, very near the shore ; and the French lines, which were defended by two redoubts and strong *abatis*, extended across the neck of the peninsula.

The garrison at this time consisted of six thousand men ; three thousand more, who had been detached to the Mohawk river, were hourly expected to return. On the morning of the 8th of July, the British troops advanced to the attack over a tract swept by the deadly fire of a sheltered enemy ; and were shot down by hundreds as they rushed forward to the *abatis*, and vainly labored to remove this fatal obstacle. Three times in the course of four hours, did they assault the works with unyielding resolution ; but their gallantry was wholly unavailing, and their officers at last put an end to this wanton sacrifice of life, and ordered them to retire.

About two thousand of the assailants perished in this rash attack, during the whole progress of which General Abercromby remained in safety two miles from the scene of action. Not a single piece of artillery was ordered up, and the assault was made precisely in the spot where the lines were best

defended. Even at the moment of their retreat, the English force was more than twice as great as that of the garrison ; the fortress might still have been reduced by a well-conducted siege ; but all further operations were at once abandoned. Major Putnam, who had been employed throughout the action in bringing up the provincial regiments, rendered great service in securing the retreat ; and, by the evening of the next day, the whole army had regained their camp at the south end of Lake George. The annals of even this war give no example of a more unfortunate or ill-conducted enterprise.

## CHAPTER III.

*Perilous Descent of the Rapids at Fort Miller.—Battle with the Indians.—Putnam taken Prisoner and treated with great Cruelty.—Sent to Ticonderoga, and thence to Montreal.—Exchanged, and returns to the Army.—Colonel Schuyler.—Putnam is commissioned Lieutenant-Colonel.—Serves under General Amherst.—Takes part in the Expedition against Havana.—Engaged in an Enterprise against the Western Indians.—Retires from the Army after Ten Years' Service.*

ONE day in the course of this summer, while Major Putnam was lying in a batteau with five men on the east side of the Hudson, near the Rapids by Fort Miller, he was suddenly warned from the opposite shore that the Indians were upon him. His batteau was at the head of the Rapids ; "to remain or cross the river would be inevitably fatal. Before the batteau could be put in motion, the Indians opened their fire from the bank ; one man, who, being at a little distance from the rest, had been of necessity left behind, was instantly seized by them, and killed.

Without a moment's hesitation Putnam seized

the helm, and steered his batteau directly down the river; there was scarcely even a chance for escape; the current was broken into whirlpools and eddies, as it rushed furiously over shelves and among projecting rocks. Without any aid from his companions, who were aghast at the danger, he guided his boat, as it shot down, in the course which seemed least threatening, avoiding the rocks and stemming the eddies. Sometimes it was turned fairly round, again it sped onward with the fleetness of a dart; till, in a few minutes, it was gliding quietly over the smooth stream below.

"On witnessing this spectacle," says Colonel Humphreys, "it is asserted that these rude sons of nature were affected with the same sort of superstitious veneration which the Europeans, in the dark ages, entertained for some of their most valorous companions. They deemed the man invulnerable, whom their balls on his pushing from the shore could not touch; and whom they had seen steering in safety down the Rapids that had never before been passed. They conceived it would be an affront against the Great Spirit to kill this favored mortal with powder and ball, if they should ever see and know him again." It will be seen, however, that some of the race were not inclined to push these religious scruples so far, as to deny themselves the satisfaction of subjecting him to the ordeal of fire.

In the month of August, Major Putnam was deserted by the fortune which had hitherto attended him, and encountered some of the most remarkable of those perils, which give a character of romance to his personal history. A corps of five hundred men, under the command of Major Rogers and himself, was detached to watch the enemy in the neighborhood of Ticonderoga. When the party reached South Bay, it was separated into two divisions, which were stationed at a considerable distance from each other; but, being discovered by the enemy, it was deemed expedient to reunite them, and to return without delay to head-quarters at Fort Edward.

They were arranged for this purpose in three divisions. Rogers headed the right, Putnam the left, and the central one was led by Captain Dallzell. At the close of the first day's march, they halted on the borders of Clear River. Early the next morning, Major Rogers, with a strange disregard of those precautions to which the Rangers were so often indebted for security, amused himself by a trial of skill with a British officer, in firing at a mark; and this signal act of imprudence was followed by the loss of many lives.

Molang, the French partisan, had been sent out with five hundred men to intercept the party, and was at this moment lying scarce a mile from their encampment. The sound of the firing guided him

at once to their position ; and he posted his men in ambush along the outskirts of the forest, near the paths through which they were to pass. Soon after sunrise the Americans resumed their march through a thicket of shrubs and brushwood, over land from which the timber had been partially cleared some years before ; and, owing to the difficulty of forcing their way through these obstructions, they moved in close columns, Putnam leading the way, Dalzell being stationed in the centre, and Rogers in the rear. Just as they had traversed the thicket and were about to penetrate the forest, they were furiously attacked by the French and savages.

The assault, however unexpected, was sustained with gallantry and coolness ; Putnam ordered his men to halt, returned the fire, and called upon Dalzell and Rogers to support him. Dalzell came immediately up ; but Rogers, instead of advancing to the aid of his associates, stationed his men between the combatants and Wood Creek, in order, as he affirmed, to guard against an attack in the rear ; or, as was suspected by others, to relieve himself from the necessity of making one in an opposite direction. The action began to assume a desperate character. Putnam was determined to maintain his ground ; his soldiers, as occasion required, fought in ranks in the open spaces of the forest, or fired from behind the shelter of the trees.

But his own fusee chanced to miss fire, while he held its muzzle against the breast of an athletic savage ; thus defenceless, he was compelled to surrender ; and his antagonist, having bound him securely to a tree, returned to the battle.

Captain Dalzell, who now commanded, maintained the fight with signal intrepidity ; but the Provincials were compelled to retreat for a little distance, closely followed by the savages, exulting in their fancied triumph, and rushing forward with shouts of victory. The Provincials rallied and drove them back beyond their former position ; and the battle here grew warmer than before. The tree to which Putnam was secured was thus brought midway between the combatants, in the centre of the hottest fire of both ; and he stood, wholly unable to move his body, or even to incline his head, in the midst of a shower of balls, of which many lodged in the tree above him, and several passed through the sleeves and skirts of his coat.

In this position, than which it would be difficult for the imagination to conceive one more appalling, he remained for more than an hour ; each of the parties meanwhile giving ground several times in succession, but not so far as to place him beyond the field of contest. Once, when the Provincials had retired a little and the savages were near him, a young Indian amused himself by throwing his

tomahawk at the tree, apparently to ascertain how nearly he could cast it to the body of the prisoner, without striking him ; and the weapon more than once lodged in the tree, within a hair's breadth of the mark. When this barbarian grew weary of his sport, a French subaltern drew near, and levelled his musket at Putnam's breast. Fortunately it missed fire. It was in vain that the latter claimed the treatment due to him as a prisoner of war. The Frenchman, instead of desisting, pushed him violently with his musket, and after dealing him a severe blow upon the cheek with the but-end of his piece, left him to his fate.

After a long and gallant contest, the Provincials remained in possession of the field ; the enemy were routed with the loss of ninety of their number, and retired, taking with them their prisoner, who was destined to undergo still greater suffering.

When the Indians had retreated to a considerable distance from the field of the battle, they deprived Major Putnam of his coat, vest, stockings, and shoes, bound his hands tightly together, and piled the packs of a number of the wounded on his back. In this wretched condition, exhausted by fatigue, and severely suffering from the injuries he had received, he was forced to march for many miles through a mountainous and rugged tract ; until the party, overcome with weariness, at length halted to rest themselves. Meantime, the tight-

ness of the cords around his wrists had caused his hands to swell, and made them exquisitely painful ; the blood was flowing from his torn and naked feet ; the weight of his burden became intolerable to his exhausted frame ; and he entreated the savages to loose his hands or to release him from his sufferings by death.

A French officer interposed, removed the ligatures, and relieved him of a portion of his burden ; the Indian, who had made him captive and who had remained behind to attend to the wounded, also came up, provided him with moccasons, and expressed much indignation at the treatment which he had received ; but soon went back, without taking measures to secure him against its repetition.

A spot for the evening's encampment was selected, and the Indians, taking with them Major Putnam, went thither in advance of the rest of the party. On the way he experienced fresh outrages, and was deeply wounded on the cheek by a blow from a tomahawk. He had been thus far spared for a darker purpose ; it had been resolved that he should perish at the stake, with all those refinements of torture, by which the savages know how to enhance the bitterness of death. The depths of the forest were chosen as the scene of sacrifice. The victim was bound entirely naked to a tree ; large piles of fuel were laid in a circle around him ; and, while these fearful preparations

were in progress, they were rendered more appalling by the wild songs and exultation of the Indians.

When all was ready and their victim was awaiting the hour of death with the fortitude which never failed him, the fire was set to the fuel about him ; but a sudden shower extinguished the flames. After repeated efforts, the blaze began to rise from every portion of the circle. Putnam's hands were closely bound, but he was still able to move his body ; and his convulsive writhing to avoid the flame gave infinite diversion to his tormentors, who accompanied their orgies with songs and dances, and their usual terrific expressions of delight.

All hope of relief was now at an end, and nature was beginning to yield to the excess of suffering, when a French officer rushed through the throng, dashed aside the blazing brands, and cut the cords of the prisoner. A savage, touched by some sudden impulse of humanity, had hurried to inform Molang of the proceedings of his fellows ; and it was this brave partisan himself, who had thus, at the last extremity, redeemed from the most horrible of deaths a gallant foe. After sternly reprimanding the Indians for their cruelty, he took Putnam under his protection, until he could restore him to his savage master.

The kindness of this master (for so the Indian

who captured Putnam was considered) bore some resemblance to the tender mercies of the wicked. He appeared to feel for the sufferings of his prisoner ; and, finding him unable to eat the hard bread set before him, in consequence of the injury inflicted by the Frenchman, moistened it with water for his relief. Apprehensive, however, that Putnam might take advantage of the darkness to escape, he removed his moccasons, and bound them to his wrists ; then placed him on the ground upon his back, and, extending his arms as far asunder as possible, secured them to two young trees. His legs were next secured in the same ingenious manner. Several long and slender poles were next cut, and laid, together with bushes, transversely across Putnam's body ; on the extremities of these lay several Indians, in such a manner that the slightest effort to escape must awaken them.

Having completed this singular cage, the Indians were content with the provision they had made for his safe-keeping ; and in this particularly inconvenient prison Putnam spent the dreary night that followed his release from death. He was accustomed to relate, that, even while thus reposing, he could not refrain from smiling as he thought of the odd subject for the canvass which was presented by the group, of which he constituted the most prominent figure ; but his merriment was probably of short duration.

Next morning he was released from durance, and provided with a blanket; some bear's meat was given him to allay his hunger, and he was permitted to resume his march without a burden. Some vexation was occasionally shown by the savages, by menacing signs and gestures, on account of the loss of their expected entertainment; but they were no longer suffered to molest him, and he reached Ticonderoga the same night, without experiencing farther violence. On his arrival there, he was placed in the custody of a French guard.

After having been examined by Montcalm, Major Putnam was transferred to Montreal. He was conducted thither by a French officer, from whom he received a courtesy and kindness which were the more welcome, from the indignities he had so lately suffered. Several American prisoners were in that city at the time; among the number was Colonel Peter Schuyler. When he heard of the arrival of Putnam, Colonel Schuyler hastened to ascertain the place of his abode. The Provincial Major had been suffered to remain without a coat, vest, or stockings; the remnant of his clothing was miserably tattered, and his body exhibited serious marks of the violence he had endured. Colonel Schuyler, when he came into his presence, was so affected by the sight, that he could hardly, in the language of Humphreys, "contain his speech within limits consistent with

the prudence of a prisoner, and the meekness of a Christian."

'He immediately supplied his countryman with all that his necessities required ; and, after securing to him, by the most active intercession, the treatment to which his rank entitled him, found means to render him a more important service. The capture of Frontenac by the British occasioned an exchange of prisoners, of which Putnam reaped the benefit by a stratagem of Colonel Schuyler. There were several officers among the prisoners, whose claim to be exchanged was superior to his ; and Schuyler, fearing that the opportunity might be lost if the character of the prisoner should be known, prevailed upon the Governor to permit him to name an officer to be included in the cartel. He then assured his Excellency, that he should name an old Provincial major, who was of no service there or elsewhere, but was very anxious to return to his wife and family, in preference to the young men, who had no families to care for.

There is another instance of the beneficence of Colonel Schuyler, not wholly unconnected with the object of this narrative. Mrs. Howe, the story of whose captivity by the Indians is familiar to American readers, was an inmate of his family in Montreal, at the time of which we speak. The first husband of this lady had been murdered by the Indians, several years before. Mr. Howe, the

second, met with a similar fate at Fort Dummer, in 1756 ; and his wife, with seven children, was carried into captivity. They wandered for many months, exposed to the extremity of hardship and privation. Her two daughters were destined by the Indians to become the wives of two young warriors ; but this scheme was defeated by the address of their mother, who prevailed upon the French commander to procure them admission into a convent at Montreal. The sons, five in number, were distributed among various Indian tribes. She was herself ransomed from the Indians by an old French officer, from whose rude importunities, as well as those of his son, she found it difficult to escape.

She had heard of Colonel Schuyler, and found means to acquaint him with her story. With his usual generosity he immediately paid the price of her ransom, and thought his work of charity imperfectly accomplished, until all her sons were restored to her. It became necessary for him to return home before the other prisoners were ready for the journey ; and he recommended Mrs. Howe and her family to the charge of Major Putnam, with whom she returned in safety to her friends ; both having experienced a larger measure of suffering, than humanity is often called to undergo.

In 1759, a plan was formed for the entire expulsion of the French from their possessions on this continent. Three powerful armies were to

enter Canada by different routes; General Wolfe was appointed to conduct an expedition up the St. Lawrence against Quebec; General Amherst, after reducing Ticonderoga and Crown Point, was to join him under the walls of that city; and a third army was destined against Fort Niagara. General Prideaux, the commander of the last, after reducing that fortress, was to attack Montreal, and, if successful, was to unite himself with the grand army at Quebec. This vast scheme was only partially accomplished before the close of the campaign.

The name and victory of Wolfe are familiar in the mouths of all as household words. Amherst succeeded in the reduction of Ticonderoga and Crown Point, but at so late a period as to prevent him from advancing into Canada; the fortress of Niagara was also taken by Prideaux, but it was not thought prudent to hazard an attack on Montreal. Such was the general condition of affairs at the close of 1759. Putnam, who had been raised to the rank of lieutenant-colonel, accompanied the army of Amherst, and was employed during the latter part of the season in strengthening the defences of Crown Point; but we have no means of giving any particular detail of his operations.

The next season, that of 1760, witnessed the termination of the war in this portion of America. Montreal was the only important post remaining

in possession of the French, whose whole force was concentrated in its neighborhood. General Amherst, the British commander-in-chief, had employed the winter in preparations to unite his forces under the walls of that city. With this view, General Murray was to advance upon it by water from Quebec ; Colonel Haviland was to proceed thither from Crown Point by the way of Lake Champlain ; while Amherst himself, at the head of an army of ten thousand men, was to enter the St. Lawrence by the way of Lake Ontario, and descend it to Montreal.

In falling down the river, the progress of the troops was arrested by two armed vessels near the mouth of the Oswegatchie, in a position which effectually prevented the British from attacking the fort of the same name in the vicinity. Lieutenant-Colonel Putnam's activity and resources were called into requisition to remove the obstacle ; and he undertook, with one thousand men, in fifty batteaux, to carry the vessels by boarding. Having made his preparations, he took his station in the van, with a chosen crew, and provided with the somewhat odd munitions of a beetle and wedges ; with these he intended to secure the rudders of the vessels, so that they might be prevented from bringing their broadsides to bear. At the appointed signal, the batteaux were put in motion, Putnam having quite unnecessarily assured

his men, that he should show them the way up the vessels' sides. But the object was effected in a less sanguinary way ; at the moment of attack, the crew of one of the vessels compelled its captain to strike, and the other was run on shore.

The fort of Oswegatchie was situated on an island, and was defended by *abatis*, overhanging the water, and apparently quite inaccessible. Putnam again devised a method of attack, for which he was indebted to no mortal engineer. With the permission of General Amherst, he caused a number of boats to be prepared, with musket-proof fascines along the sides, forming a complete shelter from the fire of the enemy ; and a broad plank, twenty feet in length, was so attached to the bows of each, that it could be elevated or depressed at pleasure. It was his intention to force the boats directly against the *abatis* ; when the planks, till then upright, were to be lowered, so as to form a species of bridge over the projecting stakes, and thus enable the assailants to scale them ; the attention of the enemy was meanwhile to be distracted by simultaneous attacks upon various portions of the works. The signal had been given, and the boats were moving in order to the attack, when the sight of their strange enginery discomposed the nerves of the besieged, who surrendered without a blow.

Putnam was highly complimented for his inge-

nuity and courage by the general-in-chief; and it is in no small degree to be attributed to him, that the armies of Amherst and Murray, approaching Montreal from opposite directions, arrived on the same day beneath its walls. Colonel Haviland came in immediately after, when the conquest of Canada became complete, by the capitulation of the French.

It deserves to be mentioned that Putnam met once more with his savage master, at an Indian village in the neighborhood of Montreal, and was welcomed by him with much hospitality. The change of circumstances had given him an opportunity, which he did not neglect, of requiting the attentions of the Indian, whose kindness, though not of the most delicate kind, had been quite beyond the usual standard of his race.

In the spring of 1762, war having been declared by Great Britain against Spain, a powerful armament was prepared at Portsmouth for the reduction of Havana. A body of four thousand regulars was ordered from New York to join the expedition on the coast of Cuba, and a large Provincial force, under its own officers, coöperated in the enterprise. The regiment from Connecticut was under the command of General Lyman; but, as he was called to the command of the whole Provincial force, the charge of it devolved on Lieutenant-Colonel Putnam.

The fleet arrived in safety on the coast of Cuba ; but a violent storm arose before the troops were landed, and one of the transports, in which was Putnam with five hundred men, was thrown upon a dangerous reef. No aid could be afforded by the other ships, which with difficulty rode out the gale ; but rafts were prepared of masts and spars, secured together with cordage, by means of which every individual reached the shore in safety. Having fortified his camp, Putnam remained for several days until the storm subsided ; his troops were then reembarked in the convoy, and joined the armament before Havana. Their seasonable arrival gave fresh courage to the English, who had landed several weeks before, and had already lost half their number by privation, disease, and the sword. Their efforts were at length successful, but the success was very dearly purchased ; the troops sunk by hundreds beneath the influence of the burning climate ; scarcely any of the American soldiers, and a feeble remnant of the officers, returned to their own country.

The hostilities of the Western Indians were not terminated by the treaty of Paris in 1763 ; and a new expedition was undertaken against them in the course of the next year, to which Connecticut contributed four hundred men. This corps was under the command of Putnam, who now for the first time received the commission of a colonel.

Among his companions in the expedition was the Indian chief, of whom he had been formerly the captive. Little opportunity, however, was afforded for brilliant services; the savages were overawed, and next year concluded a treaty with the English.

A single incident occurred, which requires to be mentioned here. Before the Provincials reached Detroit, it had been invested by the Indians. Among its defenders was Captain Dalzell, the old associate and friend of Putnam. He had been detached by General Amherst to raise the siege, and found means to gain admission to the fortress; but, reluctant to disobey the orders of his commander, made a desperate sally against a formidable force. His troops were surrounded, and attempted to retreat. They had gained a temporary shelter, when he saw one of his sergeants without, desperately wounded, and exposed to capture by the enemy; his men were ordered to bring him in, but they declined the undertaking, as too hazardous; Captain Dalzell then went forth alone, declaring that he would never leave his comrade at the mercy of the savages. As he was raising the wounded man from the ground, the fire of the enemy was poured in, and they fell together. No nobler death ever ended the triumphs of the brave!

Colonel Putnam had now been engaged in the military service for about ten years; and no man

quitted it with greater honor. A larger measure of hardship and danger than had fallen to his lot, is rarely crowded into the compass of a single life. All this had been encountered, and all his duties been discharged with a chivalrous bravery and fulness of resource, which commanded universal admiration. Military education, except such as was the result of his experience, he had absolutely none; his early instruction was very defective, and, had it been otherwise, could have done little towards qualifying him for the life which he had chosen; but he had a calm good sense, a ready ingenuity, unbounded energy and self-possession in the midst of danger, which had made him fully equal to all the stations he was called to fill.

Personal bravery is perhaps the cheapest of the military virtues; but there was something cool, daring, and unostentatious in that of Putnam, which attracted equally the wonder of the cultivated and the rude. In the words recorded by a personal friend upon his monument, he had always "dared to lead, where any dared to follow." His disposition was full of the frankness of the soldier, united with a kindness and generosity, not always found in union with the sterner qualities demanded by the life of camps; an extended intercourse with others had refined the asperities of his manners, without impairing the simplicity of his genuine New England character.

He carried with him into private life the esteem and confidence of all. Throughout the country, there prevailed a strong feeling of respect for his services and military talent; and he was regarded as not the least able proficient in that seminary of no gentle discipline, the Seven Years' War. As there was now no call for the display of his ability as a soldier, he returned to his plough; and his fellow citizens took pleasure in offering such testimonies of esteem as it was in their power to give, by electing him to fill the higher municipal offices, and to represent them in the General Assembly of the State.

## CHAPTER IV.

*Colonel Putnam opposes the Stamp Act.—Goes to Mississippi River to select Lands.—His Intimacy with the British Officers in Boston.—Hastens to the Army on hearing of the Battle of Lexington.—Made a Brigadier-General of the Connecticut Troops.—Battle of Bunker's Hill.*

THE great drama of the Revolution had already opened. In 1764, the British Parliament resolved that it would be proper to impose certain stamp duties, with a view to raise a revenue in America; and next year the fatal scheme was consummated by the passage of the Stamp Act. The ties, which bound the colonies to the mother country, were nearly severed, and a flame began to ascend, which could be extinguished only with blood.

From the outset, Putnam's heart and hand were devoted to the cause of freedom; and he brought to its support that manly energy and firmness, which never failed him in the hour of danger. He was among the foremost to compel the stamp-masters, appointed in Connecticut, to relinquish their odious office; and, when this was accomplished, became one of a committee appointed to confer with the

governor of the colony upon the subject. He was asked by Governor Fitch what he, as chief executive magistrate, was to do, if the stamped paper should be sent him by the orders of the King? "Lock it up," replied Putnam, "and give us the key; then, if you think proper, to screen yourself from responsibility, prohibit us from entering the room where it is deposited; we will send it safely back." "But should I refuse you admission?" "In five minutes your house will be levelled with the dust."

Colonel Humphreys remarks, that the report of this conversation was believed to be one reason why the stamped paper was never sent to Connecticut. The repeal of the obnoxious act, in 1766, having somewhat tranquillized the popular feeling, Colonel Putnam returned once more to his agricultural labors. They were interrupted by two accidents, by one of which he was deprived of a portion of the thumb of his right hand, while the other was attended by a compound fracture of the thigh, which made him slightly lame for the remainder of his life.

General Lyman, whose name has been already mentioned, had been deputed by the surviving officers and soldiers of the expedition to Havana, to receive in England the portion of their prize-money, remaining due. He also acted as the agent of a company, who were solicitous to procure a

grant of land upon the Mississippi. After a delay of some years, the application for the grant was successful ; and, in 1770, General Lyman, accompanied by Colonel Putnam and two or three other persons, went from Connecticut up the Mississippi to explore the tract. Putnam placed some laborers on his portion, but did not himself remain or derive any permanent advantage from the undertaking. General Lyman revisited Connecticut with the rest of the party, but soon returned to Natchez, where he formed a settlement, and remained until his death.

In the interval between this period and the beginning of hostilities, Colonel Putnam had occasion frequently to visit Boston. He was familiarly known to General Gage, Lord Percy, and the other principal British officers, and often conversed with them on the subject of the controversy. Whenever he was questioned as to the part which he proposed to take, his answer was that he should be found on his country's side, and stand ready to abide the issue. It was intimated to him, that one acquainted as he was with the military power of Great Britain, could hardly think it unequal to the conquest of a country unprovided with any regular forces, magazines, or ships of war ; and his reply to this suggestion is full of sense and judgment. If the united forces of Great Britain and the colonies had required six years to conquer

Canada, he thought it would not be easy for British troops alone to subdue a country, with which Canada bore no comparison ; and he believed that the consciousness of a sacred cause would give vigor to the efforts of the colonists. Being asked, whether an army of five thousand veterans might not march from one end of the continent to the other ; "No doubt," he said, "if they conducted themselves properly, and paid for what they wanted ; but, should they attempt it in a hostile manner, the American women would knock them on the head with their ladles."\*

On the 19th of April, 1775, the hour of trial came. Colonel Putnam was laboring in the field, when the news of the battle of Lexington was brought to him ; he left his plough standing in the furrow, and without even waiting to exchange his clothes, rode with the utmost expedition to the scene of action. On the 21st, he attended a council of war at Cambridge. The Assembly of Con-

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\* There are some other weapons, to which the women might possibly have resorted in such an emergency. In 1684, Cranfield, the governor of New Hampshire, undertook to tax the people of that colony without their consent, but found it impossible to enforce the imposition. The provost, to whom the tax-bills were committed for collection, testified, that the people of Exeter drove the sheriff away with cudgels ; the women having prepared red-hot spits and boiling water, by way of increasing the warmth of his welcome.

necticut was then in session. He was summoned back by that body to confer with them respecting the preparations for the campaign ; and, when the object was effected, received a commission as brigadier-general, and returned to the camp, leaving orders for the troops to follow as rapidly as possible. These, to the number of three thousand, were soon upon their march.

On the 21st of May, General Ward was commissioned as major-general and commander-in-chief of the troops of Massachusetts ; and his orders were obeyed by all the officers of other colonies within the province. General Putnam was first in rank among the officers of Connecticut ; but the troops from the various colonies were distributed among the several stations. The head-quarters of the commander-in-chief were at Cambridge, with eight thousand Massachusetts troops, and one thousand from Connecticut ; the latter, with two other regiments, being stationed at Inman's Farm, an advanced position, under the immediate command of General Putnam. The right wing of the army, consisting of two thousand men from Massachusetts, one thousand from Rhode Island, and the remainder of the Connecticut troops, was at Roxbury, under the command of Brigadier-General Thomas ; and the left was composed of one thousand from New Hampshire under Colonels Stark and Reed, who were at Medford, and

another detachment of the same troops, together with three companies of Gerrish's regiment, at Chelsea. General Ward had with him five companies of artillery, and General Thomas three or four. The British army in Boston, at the close of the month of May, consisted of ten thousand men.

Perhaps there was no officer in the American army, eminent as many of them certainly were, who enjoyed more of the public confidence than General Putnam. Several of them had become distinguished in the old French war, and there were some, whose capacity to conduct large military operations was perhaps superior to his; but there was no one of greater promptness and energy in action, or who had acquired a higher reputation for adventurous bravery.

In the course of the month of May, it was determined to remove the cattle from the islands in Boston harbor, in order to cut off the supplies of the enemy, who were blockaded in the town. For this purpose, three or four hundred men were detached, and succeeded in removing them from Hog Island and Noddle's Island. A skirmish was thus occasioned, in which several of the marines, who had been stationed to guard them, were killed. The Americans were fired on by the British vessels in the harbor, and a reinforcement of three hundred men, with two pieces of artillery, was ordered to support them. One of the armed

vessels, a schooner, which lay near the shore, was set on fire by the artillery, and destroyed ; and a second was towed beyond the range of the shot by the boats of the fleet. The affair was not of much importance, except as it served to inspire confidence in the troops, who found that they could encounter the enemy with success. On this occasion, General Warren accompanied Putnam as a volunteer.

The spirit of the Americans was high, and they were impatient to be led into action ; but their disorganized and unprovided state rendered such a step very hazardous. Many of the officers and men, who had been accustomed only to the irregular service of rangers, could not appreciate the necessity of long and thorough discipline ; and the general voice of the people called for some decisive measures.

General Putnam was himself desirous, that the advantage of this spirit should not be lost by inaction ; and he urged the necessity, not of hazarding a general engagement, but of some partial action in which the Americans, under cover of intrenchments, might cause the enemy to feel their skill as marksmen ; it being a favorite maxim with him, that, if the militia could find protection for their legs, they were quite indifferent to the welfare of the rest of their persons. The same opinion was maintained by Colonel Prescott and other veteran

officers, and the subject was considered with much earnestness in the council of war.

General Ward and General Warren, on the other hand, were apprehensive that the issue of an action could not fail to prove disastrous ; the supply of ammunition was very limited ; and they feared that it must terminate in a general engagement, in which the Americans would be defeated. But the bolder counsel at length prevailed. The Committee of Safety had received information, that it was the intention of the British to occupy the heights of Dorchester and Charlestown ; and the necessity of anticipating them in at least a portion of this scheme was obvious to all. The committee therefore recommended to the council of war, to take possession of Bunker's Hill without delay. The heights of Charlestown had already been examined by Putnam and other officers, and the advantage of the position fully ascertained.

For the information of those who are unacquainted with the place, it may be proper to remark, that the peninsula of Charlestown is somewhat more than a mile in length from east to west, and eleven hundred yards across from north to south ; washed on the north by Mystic River, and on the south by Charles River, which approach within about one hundred yards of each other at the Neck of the peninsula. The eastern part is separated from Boston by a narrow channel.

From the Neck rises Bunker's Hill, to the height of a little more than one hundred feet, terminating in a tongue of land, which extends for a considerable distance along the shore of Mystic River, about twenty feet above the water. The summit of Breed's Hill, which is about sixty feet in height, rises in a southeasterly direction from Bunker's Hill, towards Boston ; between this and the tongue of land, on the north, is a slough, and the village of Charlestown lay on the south, on the declivity and at the base. Morton's Point is the northeastern extremity of the peninsula, and the hill of the same name, thirty-five feet high, rises near it.

The detachment, intended for the expedition, consisting of about one thousand men, under the immediate command of Colonel Prescott, were assembled on Cambridge Common at an early hour on the evening of the 16th of June, where prayers were offered by the President of Harvard College. General Putnam accompanied the detachment. They moved at nightfall through Cambridge and across the Neck of the peninsula, Colonel Prescott, dressed in his calico frock, leading the way. A question now arose respecting the height, which was intended to be fortified. Bunker's Hill had been designated for the purpose by the Committee, while Breed's Hill appeared better suited to the object of the expedition; but it is probable, that the former name was

usually applied indiscriminately to both the heights. So much time was consumed by the discussion, that it was nearly midnight before it was concluded to erect the principal work on Breed's Hill, and a subsidiary one on Bunker's Hill for the protection of the rear, and as a rallying-point in the event of their being driven from the other.

A redoubt, about eight rods square, was accordingly laid out on the summit of Breed's Hill, with a breastwork, extending from its northeastern angle down the northern declivity to the slough. Before the action, the American line was extended to the left across the tongue of land to Mystic River. This was done by General Putnam, who ordered Captain Knowlton, just as the enemy were landing, to take post with some Connecticut troops behind a rail fence, running in the direction already mentioned, about two hundred yards in the rear of the breastwork; and an imperfect intrenchment was made by disposing other fences in a parallel line and throwing some newly-mown grass between.

While the men were engaged in their labors on the breastwork and redoubt, General Putnam returned to Cambridge to procure a reinforcement; but the report of a sudden cannonade induced him to repair without hesitation to his post. The operations of the detachment were unknown to the British until daylight, when a heavy fire was opened on them by the ships and batteries. At

the suggestion of some of his officers, who were anxious that the men should be relieved, Colonel Prescott convened a council of war; expressing at the same time his aversion to the proposition, and insisting, that, as they had endured the labor, they were entitled to the honor of the victory.

Putnam again returned to Cambridge for provisions and a reinforcement, and equally without effect. Colonel Prescott now called another council of war, still refusing to ask to be relieved; but he consented to apply to General Ward for the aid which had been twice asked in vain. Movements had already been observed among the British troops in Boston, indicating their design to prepare for an attack. By eleven o'clock, General Ward had issued his orders to the troops of Colonels Stark and Reed at Medford, to proceed to the scene of action; but, before this fact could be ascertained, all possible preparation had been made to repel the enemy.

Putnam had withdrawn a detachment from the redoubt to throw up the contemplated work on Bunker's Hill, a position by which Breed's Hill was completely commanded; and he resolved to make another effort, before the preparations of the enemy could be completed, to procure an additional force from Cambridge. He repaired thither for the third time across the Neck, which was now swept by the fire of a man-of-war and

floating batteries; but, learning there what orders had been issued, he hastened back to Charlestown.

The expected reinforcement at length arrived; and Putnam, reserving a portion of them to aid in the construction of the work on Bunker's Hill, ordered Stark and Reed to join the Connecticut troops at the rail fence with the residue. Colonel Prescott had on his part been indefatigable in his preparations, and all were anxiously awaiting the approach of the enemy.

Never was the fearful spectacle of battle presented to the eye, under circumstances more striking, or of deeper interest. Every movement of the troops on either side was distinctly open to the view of thousands, who watched from the neighboring roofs and spires the changes of the scene. On the one hand, the hopes of freedom depended on the issue; on the other there was a deep solicitude to support the honor of the British name. The day was beautifully clear and cloudless.

At noon, twenty-eight barges, containing four battalions of infantry and twenty companies of light infantry and grenadiers, with six pieces of artillery, moved in perfect order across the channel, their brilliant arms flashing in the sun of June. They landed at Morton's Point, and were soon joined by a second detachment. Shortly after, a third detachment reached the shore, near the east end

of Breed's Hill. The united force consisted of about five thousand men.

A fire was now opened on the American lines by the British artillery at Morton's Hill ; and it was answered by a few pieces from the redoubt, which soon became useless and were carried to the rear. As one of the captains of artillery was retreating over Bunker's Hill, Putnam ordered him back to his post, threatening him with death if he should disobey. He returned ; but the pieces were deserted, and his men took their stations in the line.

A single horseman rode at full speed over Bunker's Hill, and encountered General Putnam. It was General Warren ; and Putnam offered to receive his orders. Warren replied, that he came only as a volunteer, and desired to know where his services would be most useful. Putnam pointed to the redoubt, remarking that he would be covered there. "I came not," said Warren, "for the purpose of security ; tell me where the onset will be most severe." "Go, then, to the redoubt," said Putnam ; "Prescott is there, and will do his duty ; if that can be defended, the day is ours." Warren rode forward to the redoubt, where he was received with loud acclamations. Again he was offered the command by Colonel Prescott, but still declined it ; observing, that he was happy to study the art of war under such an officer.

At three o'clock, the British line was formed, and the troops moved in perfect and imposing order towards the rail fence and redoubt. Putnam hastened from his post on Bunker's Hill, rode along the lines, and ordered the men to reserve their fire till the enemy were within eight rods, and then to prove their well-known skill as marksmen ; the same order was enforced by Prescott, Stark, and all the veteran officers. As the British were advancing, all within those low intrenchments was silent as death. Just as the enemy were upon them, the signal was given ; a close and deadly fire blazed along the lines, and the front ranks of the enemy were swept down before it. Rank followed rank, but in vain ; the order was given to retreat, and a shout of victory rung through the American line.

In the mean time, reinforcements from Cambridge reached the Neck, but were reluctant to encounter the enfilading fire. When the British had retreated, Putnam hurried to the spot to bring them over, riding backward and forward several times, while the earth was thrown up by the balls around him ; but few could be persuaded to follow.

The British commander had now rallied and re-organized his men ; a second time he led them against the Americans, who were ordered to reserve their fire, till the enemy should be nearer

than before. Charlestown was at this time set on fire, and, as the troops were advancing, the flames ascended on their left. They hurried on, firing with the coolness and precision of a holiday review. Once more the American lines were still, until the enemy came to the appointed distance; again the fire blazed forth with the same fatal precision as before, and the ground in front of the intrenchments was covered with the dead and wounded.

Nearly a thousand of the enemy, with a vast proportion of officers, had now fallen; and the order to retreat was given for the second time. Major Small, the old friend of Putnam, was standing alone; the muskets were levelled at him, when Putnam threw them up with his sword, and he retired unhurt. But the ammunition of the Americans was at length exhausted. Colonel Prescott ordered his men to club their muskets, and hurl the stones of the parapet against the enemy, should they venture on a third attack; while Putnam galloped to the rear, and labored in vain to bring up the scattered reinforcements.

The British threw aside their knapsacks, and were ordered to reserve their fire, and trust to the bayonet. They then concentrated their force on the redoubt and breastwork, where every effort was vainly made to repel them. Prescott, unprovided with bayonets and exhausted of his ammuni-

tion, at length gave the reluctant order to retreat; and his troops moved slowly down the western declivity of the hill. It was at this moment, that the gallant Warren fell. The American left continued to repel the enemy, but finding their flank opened by the retreat of the right, were compelled in their turn to retire. Putnam indignantly urged the troops to make a stand upon Bunker's Hill. He took his station between them and the enemy, exposed to the hottest of the fire; but the men were unable to encounter the British bayonet. The Americans continued their retreat over the Neck to Prospect and Winter Hills, where they took up their position for the night.

In presenting this sketch of a battle, so important to the cause of freedom, it was of course impossible to enter very minutely into the conduct and services of others, who shared with General Putnam the glory of the day; and this has been rendered unnecessary by the diligent research of Colonel Swett, who has written a very interesting account of its details.

We have thus far refrained from saying anything of the particular command allotted to Putnam on this occasion. In the work to which we have just referred, he is mentioned as having the general control and superintendence of the expedition; and this opinion is supported by the following considerations. He was the only general

officer who was present at the battle ; and it is very improbable, that the various detachments should have been left without a commander of the whole. He appears also to have acted, throughout the battle and the previous arrangements for it, in this capacity.

Such was the purport of his own constant declarations ; and if any evidence were wanting of his personal honor, it may be found in the language of President Dwight respecting him. " His word was regarded as an ample security for any thing, for which it was pledged ; and his uprightness commanded absolute confidence." On the other hand, the orderly book of General Ward is silent on the subject of the expedition, and no orders for its conduct and command are now to be discovered. Under these circumstances, it is difficult to speak with certainty upon the question. However it may be determined, there can be no doubt, that the part taken by General Putnam was in the highest degree important and effective.

Shortly after the battle of Bunker's Hill, it was proposed to Putnam by Sir William Howe, through the medium of Major Small, to accept the commission of major-general in the British service. A large pecuniary offer was at the same time made to him. It is needless to say, that these offers were indignantly rejected.

## CHAPTER V.

*Putnam is appointed Major-General in the Continental Army. — Remains at Cambridge till the Evacuation of Boston. — Commands at New York. — Suggests a mode of obstructing the Navigation of the Hudson, to prevent the Enemy's Vessels from ascending it. — Commands on Long Island. — New York evacuated. — Retreat through New Jersey. — Putnam stationed at Philadelphia, and afterwards at Princeton. — Anecdotes.*

ON the 15th of June, George Washington was unanimously elected by Congress general and commander-in-chief of the American army ; and Generals Ward, Lee, Schuyler, and Putnam were appointed to act as major-generals under him. He arrived at Cambridge on the 2d of July, and next day entered upon his most momentous and responsible command. He had no personal acquaintance with Putnam before this period ; but he found him bold, energetic, and single-hearted, frank and generous in his disposition, and diligent and faithful in the discharge of all his duties. “ You seem, General Putnam,” said he, after examining a work which had been erected with great

expedition, "to have the faculty of infusing your own industrious spirit into all the workmen you employ."

In one of his letters from Cambridge, addressed to the President of Congress, he speaks of Putnam as "a most valuable man, and a fine executive officer"; and the commendation of Washington was never thoughtlessly bestowed. These are the very words, which the reader of Putnam's history would probably consider best suited to describe his personal and military character; and they are important, also, as indicating the keen glance with which Washington penetrated the qualities of those around him. In General Putnam's own sphere, which was that of prompt and chivalrous action, he had no superior; and it costs us nothing to admit, that, in the conduct of war upon a very extensive scale, he might be excelled by some of his fellow laborers in the cause of freedom.

During the remainder of this season, the condition of the army was such, as to render it inexpedient to venture upon hostile operations; there was little or no powder in the magazines, and the troops were in every respect so deficient and ill-provided, that General Washington, as he himself declared, was compelled to use art to conceal their situation from his own officers, as well as from the enemy. Meantime the people of the country, not knowing or unable to appreciate these diffi-

culties, were constantly expecting some decisive blow; and on the 22d of December, Congress resolved, that, if General Washington and his council should be of opinion, that a successful attack could be made upon the troops in Boston, he should make it, "notwithstanding the town and property in it might thereby be destroyed."

The harbor was frozen over by the middle of February, and Washington himself was then desirous of hazarding a general assault; but nearly all his officers were hostile to the scheme, and it was reluctantly abandoned. They recommended, however, in partial compliance with his suggestions, that preparations should be made to occupy the Heights of Dorchester; a measure, which could scarcely fail to be followed by a battle. It was determined, also, that, if a sufficient number of the enemy should march to the assault of that position, materially to reduce the garrison of Boston, a body of four thousand men, under the command of General Putnam, should land in the west part of the town, and force their way to the Neck at Roxbury, where the troops from that quarter were to join them.

The Heights of Dorchester were accordingly occupied; but the plan formed by the enemy to carry that position was defeated by a storm, and on the 17th of March, the town was evacuated. When the first intelligence of the preparations

of the British for departure was received at Cambridge, several regiments under the command of Putnam were embarked in boats, and dropped down the river. On landing at its mouth, the fact of the departure of the British was fully ascertained, and a detachment was ordered to take possession of the town. Another detachment marched in at the same time from Roxbury, and the whole were placed under the command of Putnam, who proceeded to possess himself of all the important posts.

Early in January, General Washington had been informed, that an expedition was fitting out at Boston, with the view to take possession of New York; and he ordered General Lee to repair immediately thither, with such volunteers as he could assemble on his march, and to make the best arrangements for its defence, that circumstances would admit. General Lee was also instructed to disarm all disaffected persons, and to examine the state of the fortifications on the North River, in order to secure them from the danger of surprise.

On his arrival at New York, it was determined to fortify some commanding position in the city, to erect batteries at Hell Gate for the security of the entrance of the harbor, as well as for the protection of the communication with Long Island, where a fortified camp was proposed to be estab-

lished, and to strengthen and garrison the defences of the Highlands.

It soon appeared, that the expedition already mentioned was destined farther south ; and Lee was ordered from New York by Congress, on the 1st of March, to take command of the Southern department of the army. After the evacuation of Boston, General Washington, deeming the preservation of New York as of the last importance to the cause, sent on a portion of his troops to that city ; and, on the 29th of March, General Putnam was ordered to assume the command at that station, and to execute the plan of defence, which had been projected by General Lee.

General Putnam, on his arrival at New York, devoted himself, with the utmost assiduity, to the charge with which he was intrusted. The British fleet had been thus far amply supplied with fresh provisions from the shore ; a species of accommodation, which he forthwith made the subject of a pointed prohibition ; and the good effects of this step were soon exhibited by the departure of some of the vessels from the harbor. By the middle of April, General Washington arrived with the greater portion of his army, and entered on the chief command ; but the preparations for defence were still prosecuted by General Putnam. On the 21st of May, Washington, in obedience to the call of Congress, went to Philadelphia to confer

with them respecting the condition of affairs; during his absence, General Putnam was commander of the army.

The judgment of Washington had easily foreseen, that New York and the Hudson would be the first objects of the attention of the enemy. Early in July, General Howe, who had sailed for Halifax after evacuating Boston, returned and landed with his army at Staten Island; where he was soon joined by a powerful armament from England, under the command of Lord Howe, his brother. Before the arrival of the squadron, General Washington, under the direction of Congress, had instructed General Putnam to prepare fire-rafts and gondolas to prevent the ships from entering the New York Bay or Narrows; and he was also charged with the supervision of various other schemes, designed for a similar object.

The plan of destroying the British fleet by means of fire-ships, had been suggested to Congress by a Mr. Anderson. General Putnam himself projected a novel species of *chevaux-de-frise* to obstruct the channel. Two ships, about seventy feet distant from each other, connected by the sterns with large pieces of timber, were ordered to be sunk with their bows towards the shore. But neither of these plans was ultimately successful; the *chevaux-de-frise* were broken by the ships of war, and an attempt made with the fire-ships to

destroy the vessels, that had passed up the river, was followed only by the burning of a single tender.

Another experiment was made, under the eye of General Putnam, with a singular machine, which was invented by David Bushnell, of Connecticut. It was a boat, so constructed as to be capable of being propelled at any depth below the surface of the water, and of being elevated or depressed at pleasure; to this was attached a magazine of powder, designed to be secured by a screw to the bottom of a ship; when the magazine should be disengaged from the boat, certain machinery was to be set in motion, which would cause it to explode at any time desired. The whole was to be managed by a single person, stationed in the boat. Mr. Bushnell, the inventor, was too feeble to undertake its management himself, but had taught the secret to his brother, who chanced to be ill at the time when the British fleet arrived.

His place was supplied by a sergeant of the army, who was instructed to manage the machine as well as time and circumstances would permit. Late in the evening he set forth upon his expedition, and sailed directly underneath the Eagle man-of-war, the flag ship of the British admiral; but the screw, with which he was to penetrate the copper sheathing, struck some iron plates, near the rudder; the tide was strong, and the inexperience of the

sergeant prevented him from applying the proper remedy to remove the difficulty, before the day began to dawn. He therefore abandoned the magazine to its fate, and reached the shore, where General Putnam was anxiously awaiting the issue of the enterprise. A prodigious explosion followed at some distance from the ship, to the infinite consternation and perplexity of all who were unacquainted with the secret; but various circumstances occurred to prevent a repetition of the experiment.

As the safety of New York essentially depended on the possession of Long Island, a body of troops was early stationed on the peninsula of Brooklyn, where a camp had been marked out and fortified. This was expected to be, as it proved, the first object of the enemy's attack. The works had been erected under the supervision of General Greene, who alone possessed a thorough knowledge of the posts and of the routes by which the British would probably approach; but he was unfortunately taken ill, and the command devolved on General Sullivan. The British army landed on the island on the 22d of August, and it became certain that an engagement must soon take place. On the 23d, General Putnam was ordered with reinforcements to take the command at Brooklyn; but the time intervening between his appointment and the battle was too short to

permit him to obtain the essential information, to which we have above alluded. The British army was now arranged in the following order. Lord Cornwallis, with the right wing, was at Flatland; the centre, under General De Heister, was at Flatbush; the left, commanded by General Grant, extended to the western shore; the centre being about four miles, and the right and left wings about six miles, distant from the American lines at Brooklyn. Besides the direct road leading from Flatbush to Brooklyn, there was another which led more circuitously by the way of Bedford. A strong redoubt had been erected by the Americans on the former, and a detachment was posted on the other; another detachment was also stationed to guard the passes by the western shore. General Putnam appears to have expected, that the principal attack would be made in the last of these directions.

On the morning of the 27th, General Clinton led the British van on the road to Bedford, designing to turn the American left, while De Heister and Grant advanced at the same time from their respective positions. Lord Stirling, with two regiments, was ordered by General Putnam to repel the corps of Grant; General Sullivan advanced on the direct road leading to Flatbush; and the American left, which consisted of two regiments, under the command of their respective

colonels, occupied the road leading from that place to Bedford. While General Clinton was effecting his main purpose of gaining the rear of the American left, attacks were made by Grant and De Heister on the right and centre, in order to withdraw their attention from this most decisive movement. The purpose of Clinton was at length effected ; the British centre, which had hitherto advanced only to divert the attention of the Americans, now attacked the troops of Sullivan ; and these, discovering the movement of Clinton upon their left, were broken and fled, leaving their general a prisoner.

Lord Stirling, in the mean time, whose situation had been rendered extremely critical by the defeat of the other divisions, gave the order to retire ; and, to cover more effectually the retreat of the main body of his detachment, charged a corps of the British under Cornwallis with spirit, and for a time with success ; but was at length compelled to surrender. The whole American force engaged in this action, amounted to about five thousand men, while the British army exceeded twice that number ; but the loss of the Americans was comparatively very great. It was shown by the result of the battle, that the camp of Brooklyn was no longer tenable ; and, on the night of the 29th, while the British were encamped within six hundred yards of the works,

the troops were withdrawn to New York, by General Washington himself, with so great celerity and skill, that nearly all the artillery and stores were saved. The movement was undiscovered by the enemy, until half an hour after the works had been evacuated, though the noise of their spades and pickaxes was distinctly heard within the American lines.

It was now obvious, that the city of New York must be sooner or later abandoned; but the principal officers of the army were solicitous to retain possession of it, as long as might be in their power. The army was arranged in three divisions; one of which, under General Putnam, was stationed in the city, another at Kingsbridge, and the third occupied an intermediate position, so that it could be readily brought to the support of either.

On the 12th of September, a council of war came to the resolution to evacuate the city, and the events of the few succeeding days demonstrated, that this measure was quite indispensable. Three days after, some British ships ascended the North River as high as Bloomingdale, while Sir Henry Clinton, with four thousand men, landed on the eastern shore of the island, at Kipp's Bay. Their landing was covered by the fire of five ships of war. The new levies stationed to defend the works at this position fled, without waiting for the enemy; and two brigades of Putnam's division,

which had been ordered to support them, imitated their example ; breaking at the approach of about sixty of the British, and flying without firing a single shot. General Washington met them in their flight, and vainly used every possible effort to rally them ; he was left alone within eighty yards of the enemy ; but he refused to fly, and was rescued only by the care of some of his attendants, who seized his horse's bridle, and turned him from the field. Orders were immediately given to secure the Heights of Haerlem ; and they were at once occupied by the fugitives and the other troops in the vicinity.

The main road leading from the city to Kingsbridge was in possession of the enemy, and General Putnam resolved to secure the retreat of his division by the route of Bloomingdale. The manner in which it was effected will be best described in the words of an eyewitness.

"Having myself," says Colonel Humphreys, "been a volunteer in his division, and acting adjutant to the last regiment that left the city, I had frequent opportunities, that day, of beholding him (Putnam), for the purpose of issuing orders and encouraging the troops, flying, on his horse covered with foam, wherever his presence was most necessary. Without his extraordinary exertions, the guards must have been inevitably lost ; and it is probable the entire corps would have been cut in pieces.

"When we were not far from Bloomingdale, an aid-de-camp came from him at full speed, to inform that a column of British infantry was descending upon our right. Our rear was soon fired upon, and the colonel of our regiment, whose order was just communicated for the front to file off to the left, was killed upon the spot. With no other loss we joined the army, after dark, upon the Heights of Haerlem. Before our brigades came in, we were given up for lost by all our friends. So critical indeed was our situation, and so narrow the gap by which we had escaped, that, the instant we had passed, the enemy closed it by extending their line from river to river."

The enemy's shipping having passed up the North River, notwithstanding the obstructions, the American army was withdrawn from the island of New York to the neighborhood of the White Plains. On the 28th of October, the British forces advanced in order of battle, and a brigade of Hessians was detached to dislodge a corps of about sixteen hundred militia from Chatterton's Hill, where they were stationed to cover the right flank of the army. After a sharp encounter, the Hessians remained in possession of the hill. Major-General Putnam, who had been ordered to support the militia, met them in full retreat, and it was then too late to attempt to retake the post; but no attack was made upon the camp of Washington, who

withdrew, on the night of the 1st of November, to the heights in the rear of his first camp.

A few days after, General Putnam was sent across the Hudson, to provide against a descent of the enemy upon New Jersey ; and on the 13th, General Washington passed the river with about five thousand men, and took post at Hackinsac. And, when Fort Washington and Fort Lee had fallen, began the retreat of the "phantom of an army," as it was emphatically called by Hamilton, through New Jersey ; when Washington was compelled to face a powerful army with scarce three thousand men ; unprovided with all that makes a soldier's life endurable, and this too in the depth of winter, and abandoned by General Lee, to whom the command on the east bank of the Hudson had unfortunately been confided.

There was no darker period in the history of the Revolution ; scarcely any spirit, but that of Washington, was unshaken by the accumulated weight of difficulty and disaster ; nor could he, without deep emotion, witness the suffering, which he had no power to relieve.

Throughout this season of peril, until the army had crossed the Delaware, General Putnam was at his commander's side ; and it may be well imagined, that he would have been one of the last to intermit his efforts in the almost hopeless cause.

The passage of the Delaware was effected on the 8th of December; it became now all-important to prevent the enemy from occupying Philadelphia, and General Putnam was ordered to make immediate provision for its fortification. Congress had already resolved that it should be defended to the last extremity.

At this time an incident occurred, which strikingly illustrates the foresight and sagacity of Washington. A report had been circulated, that Congress was about to separate; and on the 11th of December it was resolved by that Assembly, that the commander-in-chief "be desired to contradict this scandalous suggestion of the enemy, this Congress having a better opinion of the spirit and vigor of the army, and of the good people of these States, than to suppose it can be necessary to disperse; nor will they adjourn from the city of Philadelphia in the present state of affairs, until the last necessity shall direct it." This resolution was forwarded on the same day to Washington, who was at once convinced that its publication would be attended with evil consequences, and took upon himself the responsibility of suppressing it in the next day's orders.

In a letter addressed on the 12th to the President of Congress he says; "I am persuaded, if the subject is taken up and reconsidered, that Congress will concur with me in sentiment. I doubt

not, but there are some, who have propagated the report; but what if they have? Their remaining in or leaving Philadelphia must be governed by circumstances and events. If their departure should become necessary, it will be right; on the other hand, if there should not be a necessity for it, they will remain, and their continuance will show the report to be the production of calumny and falsehood. In a word, Sir, I conceive it a matter, that may be as well disregarded; and that the removal or staying of Congress, depending entirely on events, should not have been the subject of a resolve."

Well was it for Congress, that their resolution was suppressed by Washington; for, on the self-same day on which he wrote, that body adjourned to meet again in Baltimore on the 20th of December. It appears, that General Putnam, who had entered on the command, and General Mifflin, his predecessor in the station, had been summoned by Congress to a conference; and it was in consequence of their judicious suggestions, that the resolve for an adjournment was adopted.\*

"Upon the salvation of Philadelphia," was the earnest language of Washington, "our cause almost depends;" and his selection of General Putnam to command it at this crisis denotes the confi-

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\* See *Writings of Washington*, Sparks's edition, Vol. IV. p. 210.

dence reposed by the commander-in-chief in his energy and skill. Nor were his expectations disappointed; General Putnam entered on his duties with his usual diligence, forwarded with all his power the construction of the fortifications, and labored with untiring zeal to reconcile contending factions, and to animate the citizens to efforts for their own defence.

While he was thus employed, General Washington was preparing to attack the enemy at Trenton. It was a part of his original plan to call Putnam to coöperate in the enterprise, with the troops at Philadelphia and a corps of the Pennsylvania militia; but he was induced to change this plan by an apprehension of an insurrection among the Royalists within the city. General Putnam had therefore no share in the victory at Trenton, nor in that of Princeton, by which it was succeeded.

So great was the effect of these enterprises on the enemy, that Washington began to entertain the hope of driving them beyond the limits of New Jersey. On the 5th of January, 1777, he ordered General Putnam to march with the troops under his command to Crosswick, a few miles southeast of Trenton, using the utmost precaution to guard against surprise, and laboring to create an impression that his force was twice as great as it actually was. The object of the commander-in-chief was

partially accomplished by the concentration of the British forces at New Brunswick and Amboy; and General Putnam was soon after ordered to take post at Princeton, where he passed the remainder of the winter. This position was scarcely fifteen miles distant from the enemy's camp at New Brunswick; but the troops of Putnam at no time exceeded a few hundred, and were once fewer in number than the miles of frontier he was expected to guard.

Captain Macpherson, a Scotch officer of the seventeenth British regiment, had received in the battle of Princeton a severe wound, which was thought likely to prove fatal. When General Putnam reached that place, he found that it had been deemed inexpedient to provide medical aid and other comforts for one who was likely to require them for so short a period; but by his orders the captain was attended with the utmost care, and at length recovered. He was warm in the expression of his gratitude; and one day, when Putnam, in reply to his inquiries, had assured him that he was a Yankee, averred that he had not believed it possible for any human being but a Scotchman to be so kind and generous.

Indeed, the benevolence of the general was one day put to a somewhat delicate test. The patient, when his recovery was considered doubtful, solicited that a friend in the British army at New

Brunswick might be permitted to come and aid him in the preparation of his will. Full sorely perplexed was General Putnam, by his desire on the one hand to gratify the wishes of his prisoner, and a natural reluctance on the other, to permit the enemy to spy out the nakedness of his camp. His good nature at length prevailed, but not at the expense of his discretion; and a flag of truce was despatched, with orders not to return with the captain's friend until after dark.

By the time of his arrival, lights were displayed in all the apartments of the College Hall, and in all the vacant houses in the town; and the army, which then consisted of fifty effective men, were marched about with remarkable celerity, sometimes in close column, and sometimes in detachments, with unusual pomp and circumstance, around the quarters of the captain. It was subsequently ascertained, as we are assured by Colonel Humphreys, that the force of Putnam was computed by the framer of the will, on his return to the British camp, to consist, on the lowest estimate, of five thousand men.

During his command at Princeton, General Putnam was employed, with activity and much success, in affording protection to the persons in his neighborhood, who remained faithful to the American cause. They were exposed to great danger, from the violent incursions of the Loyalists;

and constant vigilance was required, in order to guard against the depredations of the latter. Through the whole winter there raged a war of skirmishes. On the 17th of February, Colonel Nielson, with a party of one hundred and fifty militia, was sent by General Putnam to surprise a small corps of Loyalists who were fortifying themselves at Lawrence's Neck. They were of the corps of Cortlandt Skinner, of New Jersey, a brigadier-general of Provincials in the British service. We know not how to relate the result of this affair more briefly than it is given in the following extract from a letter addressed by Putnam to the Council of Safety of Pennsylvania, on the day after it occurred.

"Yesterday evening, Colonel Nielson, with a hundred and fifty men, at Lawrence's Neck, attacked sixty men of Cortlandt Skinner's brigade, commanded by the enemy's renowned land pilot, Richard Stockton, and took the whole prisoners; among them the major, a captain, and three subalterns, with seventy stand of arms. Fifty of the Bedford Pennsylvania riflemen behaved like veterans."

On another occasion, he detached Major Smith with a few riflemen, against a foraging party of the enemy, and followed him with the rest of his forces; but, before he came up, the party had been captured by the riflemen. These, and other

similar incidents, may appear individually as of little moment ; but before the close of the winter, General Putnam had thus taken nearly a thousand prisoners, and had accomplished the more important object of keeping the disaffected in continual awe.

## CHAPTER VI.

*Putnam commands in the Highlands.—Operations during the Campaign.—The British ascend the Hudson.—General Putnam superintends the Construction of the Fortifications at West Point.—His perilous Adventure at Horseneck.—Retires from the Army in consequence of a Paralytic Attack.—His Death.—His military and personal Character.*

In the month of May, 1777, General Putnam was ordered by Washington to assume the chief command of the army of the Highlands, on Hudson's River; and was particularly charged with the execution of a plan, devised by Knox and Greene, to obstruct the passage of the enemy's ships in the river. Much uncertainty rested at this time on the ultimate purposes of the British generals, Burgoyne and Howe; and it became necessary for the Americans, with forces quite inadequate to the purpose, to prepare for the defence of the three important points of Ticonderoga, Philadelphia, and the Highlands.

Sometimes there was reason to believe that Burgoyne and Howe intended to unite their forces on the Hudson River; at others, that the troops

of the former would be transported by water for the purpose of reinforcing General Howe, without advancing from Canada ; and, for a considerable period, the destination of the force of Howe himself, who sailed with the British fleet from New York towards the close of July, was wrapped in equal mystery. As circumstances appeared to favor either of these suppositions, the American forces at different stations, including the greater part of that of Putnam, were detached in different directions. All that remained for him to do was to stand ready to execute the orders of Washington, and to transmit such intelligence of the enemy's movements as came into his possession ; and he attended to these objects with the activity and vigilance required by the exigency.

On the 3d of August, Sir Henry Clinton, who commanded the British force in the city of New York, sent up a flag of truce to General Putnam at Peekskill. Edmund Palmer, a lieutenant of a Tory regiment, had been detected in the American camp, and it was the purpose of Clinton to claim him as an officer in the British service. The following was the reply sent back by Putnam.

*"Head Quarters, 7th August, 1777.*

"Edmund Palmer, an officer in the enemy's service, was taken as a spy lurking within our lines ; he has been tried as a spy, condemned as a

spy, and shall be executed as a spy, and the flag is ordered to depart immediately.

"ISRAEL PUTNAM.

"P. S. He has been accordingly executed."

A few weeks afterwards, Sir Henry Clinton availed himself of the opportunity afforded by the absence of the main American army, to make an incursion into the interior of New Jersey. On the 12th of September, with a force consisting of about two thousand men, in four divisions, he proceeded to ravage the country, with little opposition. When General Putnam received intelligence of this movement, he sent General McDougall across the Hudson with fifteen hundred men; but they were too late to overtake the enemy, who returned on the 16th to New York, with considerable booty.

General Putnam himself now devised a plan for attacking the enemy at the four different points of Staten Island, Long Island, Paulus Hook, and the Island of New York, at the same time. He had been encouraged to expect the aid of large bodies of militia from Connecticut, and hoped to derive similar assistance from New Jersey and New York; and thus supported, he entertained no doubt of his ability to succeed in the enterprise.

On the 23d of September, however, he received an urgent letter from Washington, which compelled him to abandon his design. Affairs were assuming

a critical aspect in the neighborhood of Philadelphia ; and twenty-five hundred men were summoned to the main army from the force of Putnam, who was instructed to call in the militia to supply their place. For this purpose he made instant requisition on the governors of Connecticut and New York ; but, as no hostile demonstrations appeared, and the militia were impatient of detention at the time of harvest, he discharged such portions of them as had not spontaneously deserted him.

His force now consisted of about fifteen hundred men, stationed at Peekskill, on the east side of the Hudson. The defences of this river had employed much of the attention of General Washington, who relied upon them to arrest the progress of the enemy. Fort Independence was the lowest on the eastern side, just above Peekskill ; four or five miles higher, on the opposite bank, were Forts Clinton and Montgomery, and about two miles above, on an island near the eastern shore, was Fort Constitution.

Forts Clinton and Montgomery, which may be considered as one, were regarded as the strongest ; and various obstructions, defended by two frigates and a galley, were thrown across the river at their base. The garrison consisted of about six hundred men, under the command of Governor Clinton, of New York. Partly with the view of destroying

some military stores collected in the neighborhood, and partly to make a diversion in favor of General Burgoyne, an expedition against these fortresses was undertaken by Sir Henry Clinton.

On the 5th of October, he landed at Verplanck's Point, just below Peekskill, on the east bank of the Hudson, with about three thousand men ; and General Putnam retired on their approach to the high grounds in his rear. The next morning, under cover of a fog, a portion of the British crossed the river to Stony Point, and marched unobserved through the mountains in the direction of Forts Montgomery and Clinton. Governor Clinton, at ten o'clock, received the intelligence of their approach, and sent for reinforcements to Putnam, who, believing that Fort Independence was the real object of the enemy, was engaged, as well as the state of the atmosphere would permit, in reconnoitring their position. The express, sent by Clinton, failed to reach him.\*

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\* This failure is attributed by Chief Justice Marshall to the absence of General Putnam for the purpose of reconnoitring, when the messenger arrived. Colonel Humphreys, who was upon the spot, says, that the letter of Clinton miscarried through the treachery of the messenger ; that Putnam, astonished at hearing nothing from the enemy, rode to reconnoitre them, and that he (Colonel Humphreys) being alone at head-quarters when the firing began, urged Colonel Wyllys, the senior officer in camp, to send all the men not on duty to Fort Montgomery ; which was immediately done, but unhappily too late.

At five o'clock in the afternoon, both of the forts were assaulted at the same time by the British. They were resolutely defended until dark, when they were entered by the enemy at various points, and a portion of the garrison made prisoners. The greater number, from their familiar knowledge of the mountain passes, and under cover of the night, effected their escape. No intimation of the assault was received at the camp, until it was made known by the firing on the west bank of the river; a reinforcement of five hundred men was then despatched, but, before they could cross the river, the forts were in possession of the enemy.

In consequence of this disaster, Forts Independence and Constitution were evacuated; General Putnam was compelled to retire to Fishkill; the entire command of the river was lost, and the way was thrown open to Sir Henry Clinton to ascend it. In the course of a week, the arrival of the militia having increased the force of Putnam to six thousand men, he retook Peekskill and the mountain passes, and employed the main body of his troops in watching the progress of the British up the river. While on his march with this design, he received intelligence of the capitulation of Burgoyne, and five thousand men were sent to his aid from the northern army; but, before they arrived, the British had returned to New York.

When the fact of the surrender of Burgoyne had been ascertained by Washington, but before he was aware of the return of Clinton to New York, he suggested to General Putnam the expediency of uniting his forces with those of Gates, to gain, if possible, the rear of the British, and take possession of the city. This was on the 25th of October, several days after the convention of Saratoga, of which Washington had not yet been informed by Gates.

Five days afterwards, when the commander-in-chief had been apprized of the return of the British to New York, Colonel Hamilton, one of his aids-de-camp, in obedience to the decision of a council of war, was despatched by him to Putnam, to direct him to send forward the brigade he had received from the northern army. Having done this, Hamilton proceeded to the camp of Gates, to instruct him to detach a large portion of his force to the vicinity of Philadelphia. The British force in Philadelphia and its neighborhood amounted to ten thousand men; while that of Washington, the militia included, whose stay was very uncertain, did not much exceed that number.

On his return from Albany, Hamilton addressed a letter to General Putnam, expressing his surprise and regret that the orders of the commander-in-chief had not been complied with. This letter was forwarded to Washington by Putnam, with a

complaint that the reflections of Hamilton were illiberal and unjust ; that he was unconscious of having omitted any portion of his duty ; but that, without explicit orders from Washington, he could not think of remaining at his post, and sending his troops away ; the effect of which would certainly be the reinforcement of Howe's army from New York. The course of Hamilton having been in conformity with the orders of Washington, was fully approved by him, and he expressed dissatisfaction at the delay of General Putnam in complying with his orders.

This is the only instance, in which the conduct of General Putnam gave occasion to the censure of his commander ; and it is probably to be attributed to a disposition, which he had long cherished, to attempt a descent upon New York, and a too high estimate of the importance of such an enterprise.

After the departure of the troops, General Putnam moved down the Hudson with a part of his remaining force. When General Dickinson made a descent upon Staten Island, he ordered two brigades to march upon Kingsbridge, in order to divert the attention of the enemy ; but their purpose had been penetrated, and the British withdrew at their approach.

He now took post at New Rochelle, and arranged a plan for attacking the forts at Satauket

and Huntington, on Long Island ; but both were in the mean time evacuated.

This was followed by another enterprise, on a more extensive scale ; the object of which was to destroy the materials collected on Long Island for barracks in New York, together with the ships sent thither to obtain wood from Newport, to attack a regiment stationed about eight miles eastward from Jamaica, and to capture or destroy the public stores. The execution of this scheme was intrusted to General Parsons and Colonel Webb ; the former of whom succeeded in taking a few prisoners, and in destroying a sloop, together with a large quantity of boards and timber ; but the other portions of the enterprise were unsuccessful.

About the middle of December, General Putnam, in obedience to the orders of Washington, returned with his troops to the Highlands, where he spent the winter ; a winter, which was passed by Washington in his dreary encampment at Valley Forge ; in the course of which he wrote, (and a darker picture of suffering could not easily be drawn,) that he had "no less than two thousand eight hundred and ninety-eight men in camp unfit for duty, because they were barefoot and otherwise naked." Nor was the situation of Putnam in any respect more enviable ; his troops

bore their full share of suffering and privation.\*

General Washington had never lost sight of the defences of the Hudson; and, on the 25th of January, he urged on General Putnam the necessity of placing them on a respectable footing before the spring. All the old works had been demolished by the British. Early in January the several positions had been examined by Putnam, in company with Governor Clinton and others; all of whom, with the exception of Radière, a French engineer, agreed in selecting West Point, as the best position for a fortress. Colonel Humphreys claims for General Putnam the merit of this selection. However this may be, there can be no doubt that he is entitled to a large portion of the credit, particularly as it was made in opposition to the remonstrances of the engineer, who enjoyed the confidence of Congress and of Washington. Their judgment was confirmed by that of the committee of the Assembly and Council of New York, among whom was Governor Clinton, and the ground was broken in the month of January,

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\* On the 13th of February, 1778, General Putnam wrote to Washington as follows: " Dubois' regiment is unfit to be ordered on duty, there being not one blanket in the regiment. Very few have either a shoe or a shirt, and most of them have neither stockings, breeches, nor overalls."

by a brigade despatched by Putnam for the purpose.

Congress had directed that an inquiry should be made into the causes of the loss of Forts Clinton and Montgomery ; and General Putnam, who had on the 12th of February returned to Connecticut on a visit to his family, was of course required to attend, as the commander of the army of the Highlands at the time of the disaster ; but the report of the court, constituted for this purpose, attached no blame to any officer. He was, however, superseded in his command ; and the circumstances attending this change demand some notice.

In a letter addressed to him by Washington on the 16th of March, we find the following passage ; “General McDougall is to take the command of the army of the Highlands. My reason for making this change is owing to the prejudices of the people, which, whether well or ill grounded, must be indulged ; and I should think myself wanting in justice to the public and candor towards you, were I to continue you in a command, after I have been almost in direct terms informed, that the people of New York will not render the necessary support and assistance, while you remain at the head of that department.”

The complaints to which Washington refers were very general, and had probably their origin

chiefly in the ill success of Putnam's efforts to prevent the incursions of the enemy, and the loss and inconvenience, which were thus occasioned. General Schuyler's history, however, is sufficient to show, that such prejudices are not always well founded in proportion to their violence; though in this instance it was necessary for the commander-in-chief to yield to them, without deciding the question of their justness.

Among the charges urged against him, was that of exercising too much lenity in his treatment of the Tories, and of too great facility in allowing intercourse with the enemy. His situation was certainly a difficult one; his disposition inclined him to alleviate as much as possible the evils resulting both from the civil war which was raging in that quarter, and the contest with the foreign enemy; nor is it certain that a different course would have relieved him from all imputation.

Colonel Humphreys has given us an explanation of these circumstances, which is entitled to much consideration, as proceeding from one, who had every opportunity to ascertain the truth. He declares, that General Putnam became the object of this prejudice in consequence of his humanity, in showing all the indulgence he could, consistently with duty. "He had conceived," adds this writer, "an unconquerable aversion to many of the persons who were intrusted with the disposal

of Tory property, because he believed them to have been guilty of peculation, and other infamous practices. But, although the enmity between him and the sequestrators was acrimonious as mutual, yet he lived in habits of amity with the most respected characters in public departments, as well as in private life." It is difficult at this time to determine the precise weight which should be attached to the charge on one hand, and the vindication on the other; it is sufficient to say, that the former imputed to him no improper design, nor affected in any way the purity of his character.

After the termination of the inquiry, already mentioned, General Putnam was ordered to Connecticut, to hasten the march of the new levies from that quarter. He returned to the camp shortly after the battle of Monmouth, and took the command of the right wing of the army; but no important operation occurred before the retirement of the troops into their winter-quarters, the arrangement for which was made early in November. General Putnam, with three brigades, composed of the Connecticut and New Hampshire troops, and two other regiments, was then stationed at Danbury, in Connecticut.

In the course of the winter, a spirit of insubordination arose among a portion of these troops, which, but for the vigor and promptness of their

commander, might have been attended by the most serious results. The General Assembly of Connecticut was in session at Hartford; and a plan was matured by the brigades belonging to that colony, of marching thither to demand redress of the grievances under which they labored. One of them was already under arms, when the intelligence of their proceedings was brought to General Putnam. He rode instantly to their cantonment, and addressed them with his usual energy, in an appeal which went directly to a soldier's heart; when he concluded, he ordered them to march to their regimental parades and lodge their arms; and the command was instantly obeyed.

In the course of the winter, General Putnam was one day visiting his outposts at West Greenwich, when Governor Tryon, with a corps of fifteen hundred men, was on his march against it. Putnam had with him only one hundred and fifty men, with two pieces of artillery; with these he took his station on the brow of a steep declivity near the meeting-house. The road turned to the north, just before it reached the edge of the steep; after proceeding in this direction for a considerable distance, it inclined to the south, rendering the descent gradual and tolerably safe. As the British advanced, they were received with a sharp fire from the artillery; but, perceiving the dragoons about to charge, Putnam ordered his men to retire

to a swamp, inaccessible to cavalry, while he himself forced his horse directly down the precipice. His pursuers, who were close upon him, paused with astonishment as they reached the edge, and saw him accomplish his perilous descent ; and before they could gain the valley by the road, he was far beyond their reach.

The declivity, from this circumstance, has since generally borne the name of Putnam's Hill. He continued his route to Stamford, where he found some militia, with whom, added to his former band, he pursued Tryon on his retreat ; and, notwithstanding the inferiority of his force, succeeded in taking about fifty prisoners.

The military career of General Putnam terminated with the campaign of 1779, during which he commanded the Maryland line, stationed near West Point, but was engaged in no important operations. His time was principally occupied in superintending the erection of the new defences of that commanding post. There he remained until the army retired to their winter-quarters at Morristown, when he returned with his family on a visit to Brooklyn, in Connecticut, the place to which his residence had been transferred. As he was journeying towards Hartford on his way back to Morristown, his progress was arrested by an attack of paralysis, by which the use of his limbs on one side was temporarily lost. For a

season, he was reluctant to admit the real character of his disease, and resorted to very active exertion for relief; but the complaint refused to yield to the influences of such a remedy, and he was doomed to pass the remainder of his life in a state of comparative inaction.

In closing the recital of the military services of General Putnam, it would be unjust to his memory to omit a portion of a letter addressed to him by General Washington, in 1783, after the conclusion of the treaty of peace. "I can assure you, that, among the many worthy and meritorious officers, with whom I have had the happiness to be connected in service through the course of this war, and from whose cheerful assistance and advice I have received much support and confidence in the various and trying vicissitudes of a complicated contest, the name of Putnam is not forgotten; nor will be but with that stroke of time, which shall obliterate from my mind the remembrance of all those toils and fatigues, through which we have struggled for the preservation and establishment of the rights, liberties, and independence of our country."

General Putnam survived the close of the war about seven years; a period of repose, strongly contrasted with the animation and vicissitude which had marked his early and maturer life; presenting little incident for his biographer to record, yet forming an appropriate termination of a busy and

adventurous career. His age and bodily infirmities disqualified him for any public occupation, but did not impair his ability to enjoy the tranquil pleasures, that constitute the solace of declining years. He was enabled to take the moderate exercise, which the preservation of his measure of health required ; and the vigor of his mind remained unbroken to the last. Fortunately, his early agricultural labors had provided him with a competency, and shielded him from the embarrassment and sorrow, which darkened the old age of many of his brethren of the army of the Revolution ; and thus, in the retirement of his family, enjoying the regard of those around him, and the grateful respect of his countrymen, his life gradually wore away. On the 17th of May, 1790, he was suddenly attacked by an inflammatory disease, and foresaw that his end was nigh ; the consolations of religion sustained him in his closing hours, and, two days afterwards, he died with resignation and in peace. His remains were borne by his fellow-citizens to the grave with the martial honors due to the memory of a brave and patriotic soldier, and a feeling eulogy was delivered by a neighbor and personal friend.

It only remains for us to say a few words respecting the military and personal character of one, whose history we have thus attempted to delineate. His qualities as a soldier are already

apparent to the reader. Under all circumstances, however critical, he was perfectly fearless and self-possessed, and full of the most active energy and resource at the time when they were most urgently required. No man could surpass him in the fiery charge, of which the success depends so much upon the leader; in this respect he reminds the reader of Murat, the gallant marshal of Napoleon; nor would the general feeling deny him the proud title, by which another of those marshals was distinguished, that of the bravest of the brave. At the same time, as has been already intimated, he was somewhat less successful in the more extended operations, which require the combined action of large and separate masses of men. Yet, when it is remembered, that, wholly without military education and with scarcely any other, and simply by the force of his own energy and talent, he rose through all the gradations of the service to the station of first major-general in the army of the United States, till he stood second in rank to Washington alone, no better evidence could be given or required of his capacity and conduct as a soldier. Nor should it be forgotten, that his humanity was always as conspicuous as his bravery; his treatment of the sick and wounded was such as to attract the warm attachment of his own soldiers, and to extort the gratitude of the enemy. He is certainly entitled to the praise of disinterested,

ardent, and successful efforts in the cause of his country ; and he will be long remembered among those who served her faithfully and well, at a season when she wanted either the ability or the inclination to reward their toils and sacrifices.

But the military reputation of General Putnam, high as it was, concealed no dark traits of personal character beneath its shadow. In all the domestic relations, the surest tests of habitual virtue, he was most exemplary ; and his excellence in this respect deserves the more notice, as the stern discipline and wild adventure, in which so much of his life was spent, were more favorable to the growth of severer qualities. His disposition was frank, generous, and kind ; in his intercourse with others, he was open, just, sincere, and unsuspecting ; liberal in his hospitality, and of ready benevolence wherever there was occasion for his charity. Those who knew him best were the most forward to express their admiration of his excellence. The late President Dwight, who was his friend, but very unlikely to sacrifice the claims of truth to those of personal regard, has in his writings more than once expressed the sentiment, which he has embodied in the inscription on General Putnam's monument ; that he was "a man, whose generosity was singular, whose honesty was proverbial ; who raised himself to universal esteem, and offices of eminent distinction, by personal worth and a

useful life." Such is the language of others who have borne witness to his private virtues; and what more needs to be added, than that his moral excellence flowed from a religious fountain, and that the character of a man of worth was adorned and dignified in him by the higher qualities of a Christian?

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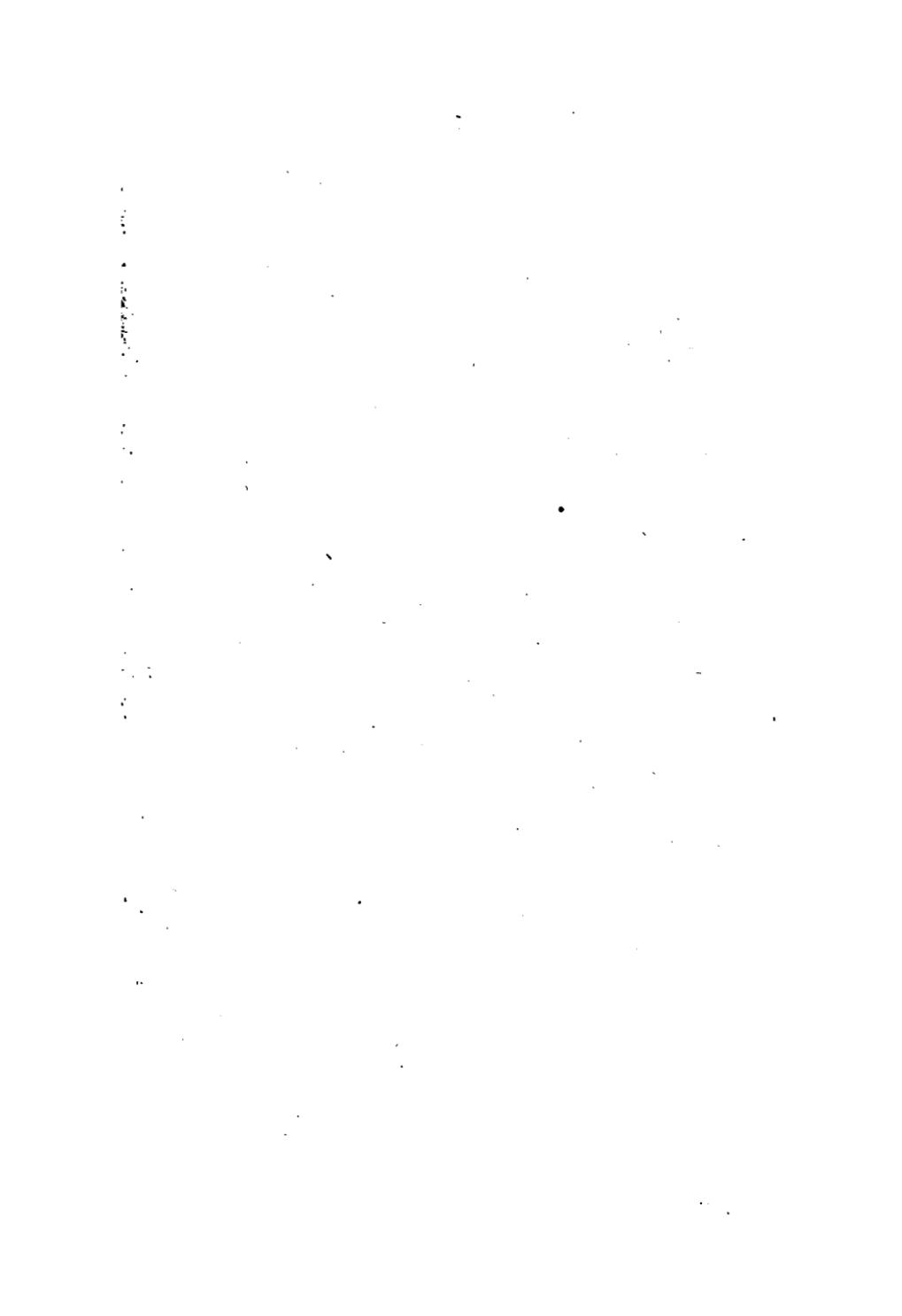
M E M O I R

OF

LUCRETIA MARIA DAVIDSON;

BY

THE AUTHOR OF REDWOOD, HOPE LESLIE,  
&c., &c.



## P R E F A C E.

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AN interesting memoir of Miss Davidson has already been written by Mr. Morse, and prefixed to the volume of her published poems, entitled “Amir Khan, and other Poems.” That memoir, being a mere introductory prefix, was necessarily, as its title announces, a “sketch.”

The editor of this biographical series, expressing it as his opinion of Miss Davidson, that “there is no record of a greater prematurity of intellect, or a more beautiful developement of native delicacy, sensibility, and moral purity,” requested a memoir from the writer of the subjoined.

It is little more than a transcript of the materials kindly furnished by Miss Davidson’s mother. There has been no effort (as there was no need) to magnify the prodigious genius of the young poet. The object sought has been to set in a clear light before her young country-women the attractive model of Lucretia Davidson’s character.



## LUCRETIA MARIA DAVIDSON.

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**LUCRETIA MARIA DAVIDSON** was born at Plattsburg, in the State of New York, on the 27th of September, 1808. Her father, Dr. Oliver Davidson, is a lover of science, and a man of intellectual tastes. Her mother, Margaret Davidson (born Miller), is of a most respectable family, and received the best education her times afforded, at the school of the celebrated Scottish lady, Isabella Graham, an institution in the city of New York, that had no rival in its day, and which derived advantages from the distinguished individual that presided over it, that can scarcely be counterbalanced by the multiplied masters and multiform studies of the present day. The family of Miss Davidson lived in seclusion. Their pleasures and excitements were intellectual. Her mother has suffered year after year from ill health and debility; and, being a person of imaginative character, and of most ardent and susceptible feelings, employed on domestic incidents, and concentrated in maternal tenderness, she naturally loved and cherished her

daughter's marvellous gifts, and added to the intensity of the fire with which her genius and her affections, mingling in one holy flame, burned till they consumed their mortal investments. We should not have ventured to say thus much of the mother, who still survives to weep, and to rejoice over her dead child more than many parents over their living ones, were it not to prove that Lucretia Davidson's character was not miraculous, but that this flower of Paradise was nurtured and trained by natural means and influences.

The physical delicacy of this fragile creature was apparent in infancy. When eighteen months old, she had a typhus fever, which threatened her life; but nature put forth its mysterious energy, and she became stronger and healthier than before her illness. No records were made of her early childhood, save that she was by turns very gay and very thoughtful, exhibiting thus early these common manifestations of extreme sensibility. Her first literary acquisition indicated her after course. She learned her letters at once. At the age of four she was sent to the Plattsburg Academy, where she learned to read and to form letters in sand, after the Lancasterian method. As soon as she could read, her books drew her away from the plays of childhood, and she was constantly found absorbed in the little volumes that her father lavished upon her. Her mother, on some occasion

in haste to write a letter, looked in vain for a sheet of paper. A whole quire had strangely disappeared. She expressed a natural vexation. Her little girl came forward confused, and said, "Mamma, I have used it." Her mother, knowing she had never been taught to write, was amazed, and asked her what possible use she could have for it. Lucretia burst into tears, and replied that she "did not like to tell." Her mother respected the childish mystery, and made no further inquiries.

The paper continued to vanish, and the child was often observed with pen and ink, still sedulously shunning observation. At last her mother, on seeing her make a blank book, asked what she was going to do with it. Lucretia blushed, and left the room without replying. This sharpened her mother's curiosity. She watched the child narrowly, and saw that she made quantities of these little books, and that she was disturbed by observation; and, if one of the family requested to see them, she would burst into tears, and run away to hide her secret treasure.

The mystery remained unexplained till she was six years old, when her mother, in exploring a dark closet, rarely opened, found, behind piles of linen, a parcel of papers, which proved to be Lucretia's manuscript books. At first the hieroglyphics seemed to baffle investigation. On one side of the leaf was an artfully-sketched picture;

on the other Roman letters, some placed upright, others horizontally, obliquely, or backwards, not formed into words, nor spaced in any mode. Both parents pored over them till they ascertained the letters were poetical explanations, in metre and rhyme, of the picture on the reverse. The little books were carefully put away as literary curiosities. Soon after Lucretia came running to her mother, painfully agitated, her face covered with her hands, and tears trickling down between her slender fingers. "Oh mamma! mamma!" she cried, sobbing, "how could you treat me so? You have not used me well! *My little books!* You have shown them to papa,—Anne,—Eliza, I know you have. Oh, what shall I do!" Her mother pleaded guilty, and tried to soothe the child by promising not to do so again. Lucretia's face brightened, a sunny smile played through her tears, as she replied, "Oh mamma, I am not afraid you will do so again, for I have burned them all." And so she had! This reserve proceeded from nothing cold or exclusive in her character; never was there a more loving or sympathetic creature. It would be difficult to say which was most rare, her modesty or the genius it sanctified.

She did not learn to write till she was between six and seven. Her passion for knowledge was then rapidly developing. She read with the closest attention, and was continually running to her

parents with questions and remarks that startled them. At a very early age her mother implanted the seeds of religion, the first that should be sown in the virgin soil of the heart. That the dews of heaven fell upon them, is evident from the breathings of piety throughout her poetry, and still more from its precious fruit in her life. Her mother remarks, that, "from her earliest years she evinced a fear of doing any thing displeasing in the sight of God; and if, in her gayest sallies, she caught a look of disapprobation from me, she would ask with the most artless simplicity, 'Oh mother, was that wicked?'"

There are, very early, in most children's lives, certain conventional limits to their humanity, only certain forms of animal life that are respected and cherished. A robin, a butterfly, or a kitten is a legitimate object of their love and caresses; but woe to the beetle, the caterpillar, or the *rat*, that is thrown upon their tender mercies. Lucretia Davidson made no such artificial discriminations. She seemed to have an instinctive kindness for every living thing. When she was about nine, one of her schoolfellows gave her a young rat, that had broken its leg in attempting to escape from a trap. She tore off a part of her pocket handkerchief, bound up the maimed leg, carried the animal home, and nursed it tenderly. The rat, in spite of the care of its little leech, died, and

was buried in the garden, and honored with "the meed of a melodious tear." This lament has not been preserved ; but one she wrote soon after on the death of a maimed pet robin, is given here as the earliest record of her muse that has been preserved.

ON THE DEATH OF MY ROBIN.

"UNDERNEATH this turf doth lie  
A little bird which ne'er could fly;  
Twelve large angle-worms did fill  
This little bird whom they did kill.  
Puss ! if you should chance to smell  
My little bird from his dark cell,  
Oh ! do be merciful, my cat,  
And not serve him as you did my rat!"

Her application to her studies at school was intense. Her mother judiciously, but in vain, attempted a diversion in favor of that legitimate sedative to female genius, the needle. Lucretia performed her prescribed tasks with fidelity and with amazing celerity, and was again buried in her books.

When she was about twelve, she accompanied her father to the celebration of Washington's birth-night. The music and decorations excited her imagination ; but it was not with her, as with most children, the mere pleasure of stimulated sensations. She had studied the character and history of the father of her country, and the *fête* stirred up her enthusiasm, and inspired that feeling

of actual existence and presence peculiar to minds of her temperament. To the imaginative there is an extension of life, far back into the dim past, and forward into the untried future, denied to those of common mould.

The day after the *fête*, her elder sister discovered her absorbed in writing. She had sketched an urn, and written two stanzas beneath it. She was persuaded, with some difficulty, to show them to her mother. She brought them blushing and trembling. Her mother was ill in bed ; but she expressed her delight with such unequivocal animation, that the child's face changed from doubt to rapture, and she seized the paper, ran away, and immediately added the concluding stanzas. When they were finished, her mother pressed her to her bosom, wept with delight, and promised her leisure, and all the instruction she could give her. The sensitive child burst into tears. "And do you *wish* me to write, mamma ?" she said, "and will papa approve ? and will it be *right* that I should do so ?" This delicate conscientiousness gives an imperishable charm to the stanzas, and to fix it in the memory of our readers we here quote them from her published poems.

"**A**ND does a hero's dust lie here ?  
Columbia ! gaze and drop a tear !  
His country's and the orphan's friend,  
See thousands o'er his ashes bend !

“ Among the heroes of the age,  
He was the warrior and the sage !  
He left a train of glory bright,  
Which never will be hid in night !

“ The toils of war and danger past,  
He reaps a rich reward at last ;  
His pure soul mounts on cherub’s wings,  
And now with saints and angels sings.

“ The brightest on the list of Fame,  
In golden letters shines his name ;  
Her trump shall sound it through the world,  
And the striped banner ne’er be furled !

“ And every sex and every age,  
From lisping boy to learned sage,  
The widow and her orphan son,  
Revere the name of Washington.”

Lucretia did not escape the common trial of precocious genius. A literary friend, to whom Mrs. Davidson showed the stanzas, suspected the child had, perhaps unconsciously, repeated something she had gathered from the mass of her reading, and she betrayed her suspicions to Lucretia. She felt her rectitude impeached, and this, and not the wounded pride of the young author, made her weep till she was actually ill. As soon as she recovered her tranquillity, she offered a poetic and playful remonstrance,\* which set the matter at rest, and put an end to all future question of the authenticity of her productions.

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\* See the Biographical Sketch prefixed to “Amir Kkan, and other Poems,” p. ix.

Before she was twelve years old, she had read the English poets. "The English poets," says Southey, in his review of Miss Davidson's poems, "though a vague term, was a wholesome course for such a mind."\* She had read beside much history, sacred and profane, novels, and other works of imagination. Dramatic works were particularly attractive to her. Her devotion to Shakspeare is expressed in an address to him written about this time, from which we extract the following stanza :

"Heaven, in compassion to man's erring heart,  
Gave thee of virtue, then of vice a part,  
Lest we in wonder here should bow before thee,  
Break God's commandment, worship and adore thee."

Ordinary romances, and even those highly-wrought fictions, that without any type in nature have such a mischievous charm for most imaginative young persons, she instinctively rejected. Her healthy appetite, keen as it was, was under the government of a pure and sound nature. Her mother, always aware of the worth of the gem committed to her keeping, amidst her sufferings from ill health and other causes, kept a watchful eye on her child, directed her pursuits, and sympathized in all her little school labors and trials. She perceived that Lucretia was growing pale and sickly over her studies, and she judiciously withdrew her, for a time, from school.

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\* See the London Quarterly Review, No. 82.

She was soon rewarded for this wise measure by hearing her child's bounding step as she approached her sick-room, and seeing the cheek bent over her pillow, blooming with returning health. How miserably mistaken are those, who fancy that all the child's lessons must be learned from the school-book, and in the school-room! This apt pupil of Nature had only changed her books and her master. Now she sat at the feet of the great teacher, Nature, and read and listened, and thought, as she wandered along the Saranac, or contemplated the varying aspects of Cumberland Bay. She would sit for hours and watch the progress of a thunder-storm, from the first gathering of the clouds to the farewell smile of the rainbow. We give a specimen of the impression of these studies in the following extract from her unpublished poems.

#### TWILIGHT.

“How sweet the hour when daylight blends  
With the pensive shadows on evening’s breast,  
And dear to the heart is the pleasure it lends,  
For ‘t is like the departure of saints to their rest.

“Oh ‘tis sweet, Saranac, on thy loved banks to stray,  
To watch the last day-beam dance light on thy wave,  
To mark the white skiff as it skims o’er the bay,  
Or heedlessly bounds o’er the warrior’s grave.”

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\*Cumberland Bay was the scene of a battle during the last war.

"Oh 't is sweet to a heart unentangled and light,  
 When with hope's brilliant prospects the fancy is blest,  
 To pause 'mid its day-dreams so witchingly bright,  
 And mark the last sunbeams while sinking to rest."

The following, from her unpublished poems, is the result of the same pensive meditations.

THE EVENING SPIRIT.

"WHEN the pale moon is shining bright,  
 And nought disturbs the gloom of night,  
 'T is then upon yon level green,  
 From which St. Clair's dark heights are seen,  
 The Evening Spirit glides along,  
 And chants her melancholy song ;  
 Or leans upon a snowy cloud,  
 And its white skirts her figure shroud.  
 By zephyrs light she 's wafted far,  
 And contemplates the northern star,  
 Or gazes from her silvery throne,  
 On that pale queen, the silent moon.  
 Who is the Evening Spirit fair,  
 That hovers o'er thy walls, St. Clair ?  
 Who is it that with footsteps light  
 Breathes the calm silence of the night ?  
 Ask the light zephyr, who conveys  
 Her fairy figure o'er the waves.  
 Ask yon bright fleecy cloud of night,  
 Ask yon pale planet's silver light,  
 Why does the Evening Spirit fair  
 Sail o'er the walls of dark St. Clair ?"

In her thirteenth year the clouds seemed heavily gathering over her morning. Her father had suf-

fered many losses and discouragements during the war. The result of his professional labors was scarcely adequate to the wants of his family. Her mother was so ill that she could no longer extend to her child the sympathy, help, and encouragement that she needed. Lucretia was oppressed with the apprehension of losing this fond parent, who for weeks and months seemed on the verge of the grave. There are among her unpublished poems, some touching lines to her mother, written, I believe, about this time, concluding thus :

“Hang not thy harp upon the willow ;  
That weeps o'er every passing wave ;  
This life is but a restless pillow,  
There 's calm and peace beyond the grave.”

But far more touchingly than by the most eloquent song, did she evince her filial affection. Dr. Davidson's well-selected library, which had been, at all times, the dearest solace of his daughter, had been broken up and dispersed at the invasion of Plattsburg, and Lucretia sighed over the empty shelves. Her father met, at a friend's house, an English gentleman, who, saying he had heard much of the little girl who promised to do great honor to American literature, expressed a strong desire to see some of her productions. With difficulty her father obtained her permission to send copies of a few of them to the stranger. He returned a polite note to the father, expressing

his gratification, and enclosed a twenty-dollar note for Lucretia. Her father gave it to her, telling her to regard it as the first fruit of her poetical merit. She took the bank note and examined it with eager simplicity, and exclaiming, "Oh papa ! how many books it will buy !" then, casting her eyes to the bed where her suffering mother was lying, a shade of tenderness passed over her radiant face, and she added, "Oh no, no, no ! I cannot spend it ; take it, papa, I do not want it, take it and buy something for mamma !" How must those parents have blessed the darkness of that adversity, on which such light from heaven shone ! To them it must have been given *to see* the gracious ministry of what the world calls poverty, in nurturing those virtues that were rapidly ripening for immortality.

Mrs. Davidson's health gradually amended, and with it returned her desire to give her daughter leisure, and every other means within her power to aid the developement of her extraordinary genius. For this some blamed, and others laughed at her. The taunts of vulgar minds reached Lucretia's ears. "Was she to be made a learned lady ? a reverend ? or fitted for the law ?" This she might have borne ; but, when she heard whispers that it was her filial duty to sacrifice her literary tastes, and to bear a part of the domestic burden that weighed too heavily on her mother, she made a

secret resolution, to devote herself exclusively to the tasks thus gratuitously prescribed. She put her books aside, and her mother observed her assiduously devoted to her needle, and to household labors. Her mind languished for its daily bread. She became pale and dejected; and her vigilant mother, after much pains, extracted the reason of her change of pursuits, and persuaded her to resume her books and pen. Her cheerfulness returned, and she was again the life and charm of her home. Her extreme sensibility and delicate health subjected her, at times, to depression of spirits; but she had nothing of the morbid dejection, the exclusiveness, and hostility to the world, that are the results of self-exaggeration, selfishness, and self-idolatry, and not the natural offspring of genius and true feeling, which, in their healthy state, are pure and living fountains, flowing out in abundant streams of love and kindness.\*

Indulgent as Mrs. Davidson was, she was too wise to permit Lucretia to forego entirely the customary employments of her sex. When engaged with these, it seems she sometimes played truant with her Muse. Once she had promised to do a sewing-task, and had eagerly run off for her work-

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\* Genius, like many other sovereigns, has been allowed the exercise of unreasonable prerogatives; but none, perhaps much more mischievous, than the right to confer on self-indulgence the gracious name of *sensibility*.

basket. She loitered, and, when she returned, she found her mother had done the work, and that there was a shade of just displeasure on her countenance. "Oh mamma!" she said, "I did *forget*, I am grieved. I did not mean to neglect you." "Where have you been, Lucretia?" "I have been *writing*," she replied, confused. "As I passed the window, I saw a solitary sweet-pea. I thought they were all gone; this was alone; I ran to smell it; but, before I could reach it, a gust of wind broke the stem. I turned away disappointed, and was coming back to you; but, as I passed the table, there stood the inkstand, and I forgot you." If our readers will turn to her printed poems,\* and read "The Last Flower of the Garden," they will not wonder that her mother kissed her, and bade her never resist a similar impulse.

When in her "happy moments," as she termed them, the impulse to write was irresistible. She always wrote rapidly, and sometimes expressed a wish that she had two pairs of hands, to record as fast as she composed. She wrote her short pieces standing, often three or four in a day, in the midst of the family, blind and deaf to all around her, wrapt in her own visions. She herself describes these visitations of her Muse, in an address to her, beginning;

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\* Amir Khan and Other Poems, p. 87.

"Enchanted when thy voice I hear,  
I drop each earthly care;  
I feel as wafted from the world  
To Fancy's realms of air."

When composing her long and complicated poems, like "Amir Khan," she required entire seclusion. If her pieces were seen in the process of production, the spell was dissolved ; she could not finish them, and they were cast aside as rubbish.

When writing a poem of considerable length, she retired to her own apartment, closed the blinds, and, in warm weather, placed her *Aeolian* harp in the window. Her mother has described her, on one of these occasions, when an artist would have painted her as a young genius communing with her Muse. We quote her mother's graphic description : "I entered her room. She was sitting with scarcely light enough to discern the characters she was tracing. Her harp was in the window, touched by a breeze just sufficient to rouse the spirit of harmony. Her comb had fallen on the floor, and her long dark ringlets hung in rich profusion over her neck and shoulders, her cheek glowed with animation, her lips were half unclosed, her full, dark eye was radiant with the light of genius, and beaming with sensibility, her head rested on her left hand, while she held her pen in her right. She looked like the inhabitant of another sphere. She was so wholly absorbed,

that she did not observe my intrusion. I looked over her shoulder, and read the following lines;

'What heavenly music strikes my ravished ear,  
So soft, so melancholy, and so clear?  
And do the tuneful Nine then touch the lyre,  
To fill each bosom with poetic fire?  
Or does some angel strike the sounding strings,  
Who caught from echo the wild note he sings?  
But ah! another strain, how sweet! how wild!  
Now rushing low, 'tis soothing, soft, and mild.'

"The noise I made in leaving the room roused her, and she soon after brought me her 'Lines to an *Æolian harp.*' "

During the winter of 1822 she wrote a poetical romance, entitled "Rodri." She burned this, save a few fragments found after her death. These indicate a well-contrived story, and are marked by the marvellous ease and grace that characterized her versification. During this winter she wrote also a tragedy, "The Reward of Ambition," the only production she ever read aloud to her family. The following summer, her health again failing, she was withdrawn from school, and sent on a visit to some friends in Canada. A letter, too long to be inserted here entire, gives a very interesting account of the impression produced on this little thoughtful and feeling recluse by new objects and new aspects of society. "We visited," says the writer, "the British fortifications at Isle-aux-Noix.

The broad ditch, the lofty ramparts, the drawbridge, the covered gate-way, the wide-mouthed cannon, the arsenal, and all the imposing paraphernalia of a military fortress, seemed connected in her mind with powerful associations of what she had read, but never viewed before. Instead of shrinking from objects associated with carnage and death, like many who possess not half her sensibility, she appeared for the moment to be attended by the god of war, and drank the spirit of battles and sieges, with the bright vision before her eyes of conquering heroes and wreaths of victory."

It is curious to see thus early the effect of story and song in overcoming the instincts of nature ; to see this tender, gentle creature contemplating the engines of war, not with natural dread, as instruments of torture and death, but rather as the forges by which triumphal cars and wreaths of victory were to be wrought.

A similar manifestation of the effect of tradition and association on her poetic imagination is described in the following passages from the same letter. "She found much less in the Protestant than in the Catholic churches to awaken those romantic and poetic associations, created by the record of events in the history of antiquity and traditional story, and much less to accord with the fictions of her high-wrought imagination. In viewing the buildings of the city, or the paintings in the

churches, the same uniformity of taste was observable. The modern, however beautiful in design or execution, had little power to fix her attention; while the grand, the ancient, the romantic, seized upon her imagination with irresistible power. The sanctity of time seemed, to her mind, to give a sublimity to the simplest objects; and whatever was connected with great events in history, or with the lapse of ages long gone by, riveted and absorbed every faculty of her mind. During our visit to the nunneries she said but little, and seemed abstracted in thought, as if, as she herself so beautifully expresses it, to

‘Roll back the tide of time, and raise  
The faded forms of other days.’

“ She had an opportunity of viewing an elegant collection of paintings. She seemed in ecstasies all the evening, and every feature beamed with joy.”

The writer, after proceeding to give an account of her surprising success in attempts at pencil-sketches from nature, expresses his delight and amazement at the attainments of this girl of fourteen years in general literature, and at the independence and originality of mind that resisted the subduing, and, if I may be allowed the expression, the subordinating effect of this early intimacy with captivating models. A marvellous resistance, if we take into the account “ that timid, retiring

modesty," which, as the writer of the letter says, "marked her even to a painful excess."

Lucretia returned to her mother with renovated health, and her mind bright with new impressions and joyous emotions. Religion is the natural, and only sustaining element of such a character. Where, but at the ever fresh, sweet, and life-giving fountains of the Bible, could such a spirit have drunk, and not again thirsted? During the winter of 1823, she applied herself more closely than ever to her studies. She read the Holy Scriptures with fixed attention. She almost committed to memory the Psalms of David, the Lamentations of Jeremiah, and the Book of Job, guided in her selection by her poetic taste. Byron somewhere pronounces the Book of Job the sublimest poetry on record. During the winter, Miss Davidson wrote "A Hymn on Creation," the "Exit from Egyptian Bondage," and versified many chapters of the Bible. She read the New Testament, and particularly those parts of it that contain the most affecting passages in the history of our Savior, with the deepest emotion.

In her intellectual pursuits and attainments only was she premature. She retained unimpaired the innocence, simplicity, and modesty of a child. We have had descriptions of the extreme loveliness of her face, and gracefulness of her person, from less doubtful authority than a fond mother.

Our country towns are not regulated by the conventional systems of the cities, where a youthful beauty is warily confined to the nursery and the school, till the prescribed age for the *coming out*, the *coup-de-théâtre* of every young city-woman's life, arrives. In the country, as soon as a girl can contribute to the pleasures of society, she is invited into it. During the winter of 1823, Plattsburg was gay, and Miss Davidson was eagerly sought to embellish the village dances. She had been at a dancing-school, and, like most young persons, enjoyed excessively this natural exercise; for that may be called natural which exists among all nations, barbarous and civilized. Mrs. Davidson has given a history of her daughter's *first ball*, which all young ladies at least will thank us for transcribing almost verbatim, as it places her more within the circle of their sympathies. Her mother had consented to her attending one or two public assemblies, in the hope they might diminish her extreme timidity, painful both to Lucretia and to her friends.

The day arrived; Mrs. Davidson was consulting with her eldest daughter upon the all-important matter of the dresses for the evening. Lucretia sat by, reading, without raising her eyes from the book, one of the Waverley novels. "Mamma, what shall Luly wear?" asked her elder sister, calling her by the pretty diminutive by which they

usually addressed her at home. "Come, Lucretia, what color do you wear to-night?" "Where?" "Where! why, to the assembly to be sure." "The assembly! Is it to-night? So it is!" and she tossed away the book and danced about the room, half wild with delight; her sister at length called her to order, and the momentous question respecting the dress was definitively settled. She then resumed her reading, and, giving no farther thought to the ball, she was again absorbed in her book.

This did not result from carelessness of appearance or indifference to dress. On the contrary, she was rather remarkable for that nice taste, which belongs to an eye for proportion and coloring; and any little embellishment or ornament she wore, was well chosen, and well placed. But she had that right estimate of the relative value of objects, which belongs to a superior mind. When the evening approached, the star of the ball again shone forth, she threw aside her book, and began the offices of the toilet with girlish interest, and it might be with some heart-beatings at the probable effect of the lovely face her mirror reflected. Her sister was to arrange her hair, and Lucretia put on her dressing-gown to await her convenience; but, when the time came, she was missing. "We called her in vain," says Mrs. Davidson; "at last, opening the parlor-door, I indistinctly saw, for it was twilight, some person sitting behind the great

close stove. I approached nearer, and found Lucretia writing poetry ! moralizing 'on what the world calls pleasure' ! I was almost dumb with amazement. She was eager to go, delighted with the prospect of pleasure before her ; yet she acted as if the time were too precious to spend in the necessary preparations, and she sat still and finished the last stanza, while I stood by, mute with astonishment at this strange bearing in a girl of fourteen, preparing to attend her first ball, an event she had anticipated with so many mingled emotions." "She returned from the assembly," continues her mother, " wild with delight. 'Oh mamma,' said she, 'I wish you had been there ! When I first entered, the glare of light dazzled my eyes, my head whizzed, and I felt as if I were treading on air ; all was so gay, so brilliant ! But I grew tired at last, and was glad to hear sister say it was time to go home.' "

The next day the ball was dismissed from her mind, and she returned to her studies with her customary ardor. During the winter she read Josephus, Charles the Fifth, Charles the Twelfth, read over Shakspeare, and various other works in prose and poetry. She particularly liked Addison, and read, almost every day, a portion of the Spectator. Her ardent love of literature seldom interfered with her social dispositions, never with her domestic affections. She was the life and joy of the home circle.

Miss Davidson's tranquillity was again interrupted by those misjudging persons, who, mistaking a woman's *first* duty for her *whole* duty, were much disturbed by this little girl's devotion to literature. Her conscience, stimulated by her affection, easily took the alarm, when they represented her mother as sinking beneath her burdens ; and she again secretly resolved to abandon her beloved studies, to throw away her pen, and to devote herself exclusively to domestic occupations. She was now older, and more determined and rigorous in the execution of her resolution. But to carry it into effect, as those will easily comprehend who know the details of a country family in narrow circumstances, required strength of body as well as strength of mind. Great demands were made on her feelings about this time by two extraordinary domestic events ; the marriage and removal of her elder sister, her beloved friend and companion ; and the birth of another, the little Margaret, so often the fond subject of her poetry. New, and doubtless sanative, emotions were called forth by this last event. The following lines from her published poems were written about this time.

## ON THE BIRTH OF A SISTER.

"SWEET babe ! I cannot hope that thou 'lt be freed  
From woes, to all since earliest time decreed ;  
But mayst thou be with resignation blessed,  
To bear each evil, howsoe'er distressed.

"May Hope her anchor lend amid the storm,  
And o'er the tempest rear her angel form;  
May sweet Benevolence, whose words are peace,  
To the rude whirlwind softly whisper 'Cease!'

"And may Religion, Heaven's own darling child,  
Teach thee at human cares and griefs to smile ;  
Teach thee to look beyond this world of woe,  
To Heaven's high fount, whence mercies ever flow.

"And when this vale of years is safely passed,  
When death's dark curtain shuts the scene at last,  
May thy freed spirit leave this earthly sod,  
And fly to seek the bosom of thy God."

The following lines, never before published, and, as we think, marked by more originality and beauty, were written soon after, and, as those above, with her infant sister on her lap. What a subject for a painter would this beautiful impersonation of genius and love have presented !

#### THE SMILE OF INNOCENCE.

[Written at the age of fifteen.]

"**T**HREE is a smile of bitter scorn,  
Which curls the lip, which lights the eye ;  
There is a smile in beauty's morn  
Just rising o'er the midnight sky.

"There is a smile of youthful joy,  
When hope's bright star 's the transient guest ;  
There is a smile of placid age,  
Like sunset on the billow's breast.

“There is a smile, the maniac’s smile,  
Which lights the void which reason leaves,  
And, like the sunshine through a cloud,  
Throws shadows o’er the song she weaves.

“There is a smile of love, of hope,  
Which shines a meteor through life’s gloom ;  
And there ’s a smile, Religion’s smile,  
Which lights the weary to the tomb.

“There is a smile, an angel smile,  
That sainted souls behind them leave ;  
There is a smile, which shines through toil,  
And warms the bosom, though in grief.

“And there ’s a smile on nature’s face,  
When evening spreads her shades around ;  
It is a smile which angels might  
Upon their brightest lists enrol.

“It is the smile of innocence,  
Of sleeping infancy’s light dream ;  
Like lightning on a summer’s eve,  
It sheds a soft, a pensive gleam.

“It dances round the dimpled cheek,  
And tells of happiness within ;  
It smiles what it can never speak,  
A human heart devoid of sin.”

The three last most beautiful stanzas must have been inspired by the sleeping infant on her lap, and they seem to have reflected her soul’s image, as we have seen the little inland lake catch and give back the marvellous beauty of the sunset clouds.

At this time, in pursuance of her resolution to devote herself to domestic duties, gall the harness as it might, she wrote no poetry except with her sister in her arms. Her labors were augmented by accidental circumstances. Her elder sister had removed to Canada; her mother, who was very ill, lost her monthly nurse; the infant, too, was ill. Lucretia for a while sustained her multiplied and varied cares with firmness and efficiency. The belief, that she was doing her duty, gave her strength almost preternatural. I shall quote her mother's words, for I should fear to enfeeble, by any version of my own, the beautiful example of this conscientious little being.

"Lucretia astonished us all. She took her station in my sick-room, and devoted herself wholly to the mother and child; and, when my recovery became doubtful, instead of resigning herself to grief, her exertions were redoubled, not only for the comfort of the sick, but she was an angel of consolation to her afflicted father. We were astonished at the exertions she made, and the fatigue she endured; for, with nerves so weak, a constitution so delicate, and a sensibility so exquisite, we trembled lest she should sink with anxiety and fatigue. Until it ceased to be necessary, she performed not only the duty of a nurse, but acted as superintendent of the household."

When her mother became convalescent, Lu-

cretia continued her exclusive devotion to household affairs. She did not so much yield to her ruling passion as to look into a book, or take up a pen, as was to be expected from the intimate union of soul and body. When her mind was starved, it became dejected, and her body weak, and, in spite of her filial efforts, her mother detected tears on her cheeks, was alarmed by her excessive paleness, and expressed her apprehensions that she was ill. "No, mamma," she replied, "not ill, only out of spirits." Her mother then said she had observed, that of late she neither wrote nor read. She burst into tears. "Oh mamma, don't name it!" she said; "I have resigned all these things." A full explanation followed, and the generous mother succeeded in convincing her child, that she had been misguided in the course she had adopted, that the strongest wish of her heart was to advance her in her literary career, and that for this she would make every exertion and sacrifice; at the same time she very judiciously advised her to intersperse her literary pursuits with those domestic occupations so essential to prepare every woman in our land for a housewife, her probable destiny.

This conversation had a most happy effect. The stream flowed again in its natural channels, and Lucretia became cheerful, read, and wrote, and practised drawing. She had a decided taste for drawing, and excelled in it. She sung over her

work, and in every way manifested the healthy condition, that results from a wise obedience to the laws of nature.

We trust there are thousands of young ladies in our land, who, at the call of filial duty, would cheerfully perform domestic labor ; but, if there are any, who would make a strong love for more elevated and refined pursuits an excuse for neglecting these coarser duties, we would commend them to the example of this conscientious child. She, if any could, might have pleaded her genius, or her delicate health, or her mother's most tender indulgence, for a failure, that, in her, would have hardly seemed to us a fault.

During this summer she went to Canada with her mother, where she revelled in an unexplored library, and enjoyed most heartily the social pleasures at her sister's. They had a family concert of music every evening. Mrs. Townsend, her sister, accompanied the instruments with her fine voice. Lucretia was often moved by the music, and particularly by her favorite song, Moore's "Farewell to my Harp." This she would have sung to her at twilight, when it would excite a shivering through her whole frame. On one occasion she became cold and pale, and was near fainting, and afterwards poured her excited feelings forth in the following address ;

## TO MY SISTER.

“WHEN evening spreads her shades around,  
And darkness fills the arch of Heaven ;  
When not a murmur, nor a sound  
To fancy’s sportive ear is given ;

“When the broad orb of Heaven is bright  
And looks around with golden eye ;  
When nature, softened by her light,  
Seems calmly, solemnly to lie ;

“Then, when our thoughts are raised above  
This world, and all this world can give ;  
Oh sister, sing the song I love,  
And tears of gratitude receive.

“The song which thrills my bosom’s core,  
And hovering, trembles, half afraid,  
Oh sister, sing the song once more,  
Which ne’er for mortal ear was made.

“T were almost sacrilege to sing  
Those notes amid the glare of day ;  
Notes borne by angel’s purest wing,  
And wafted by their breath away.

“When sleeping in my grass-grown bed,  
Should’st thou *still* linger here above,  
Wilt thou not kneel beside my head,  
And, sister, sing the song I love ?”

We insert here a striking circumstance that occurred during a visit she made to her sister the following year. She was at that time employed

in writing her longest published poem, "Amir Khan." Immediately after breakfast she went out to walk, and, not returning to dinner, nor even when the evening approached, Mr. Townsend set forth in search of her. He met her, and, as her eye encountered his, she smiled and blushed, as if she felt conscious of having been a little ridiculous. She said she had called on a friend, and, having found her absent, had gone to her library, where she had been examining some volumes of an Encyclopædia, to aid her, we believe, in the Oriental story she was employed upon. She forgot her dinner and her tea, and had remained reading, standing, and with her hat on, till the disappearance of daylight brought her to her senses.

In the interval between her visits, she wrote several letters to her friends, which are chiefly interesting from the indications they afford of her social and affectionate spirit. We subjoin a few extracts. She had returned to Plattsburg amid the bustle of a Fourth of July celebration. "We found," she says, "our brother Yankees had turned out well to celebrate the Fourth. The wharf from the hill to the very edge of the water, even the rafts and sloops, were black with the crowd. If some very good genius, who presided over my destiny at that time, had not spread its protecting pinions round me, like every thing else in my possession, I should have lost even my

precious self. What a truly lamentable accident it would have been just at that moment! We took a carriage, and were extricating ourselves from the crowd, when Mr. ——, who had pressed himself through, came to shake hands, and bid good bye. He is now on his way to ——. Well! here is health, happiness, and ‘a bushel of love’ to all *married* people! Is it possible, you ask, that Sister Lue could ever have permitted such a toast to pass her lips? We arrived safely at our good old house, and found every thing as we had left it. The chimney swallows had taken up their residence in the chimney, and rattled the soot from their sable habitations over the hearth and carpet. It looked like desolation indeed. The grass is high in the door-yard; the wild-roses, double-roses, and sweet-briar are in full bloom, and, take it all in all, the spot looks much as the garden of Eden did after the expulsion of Adam and Eve.

“We had just done tea when M—— came in, and sat an hour or two. What, in the name of wonder, could he have found to talk about all that time? Something, dear sister, you would not have thought of; something of so little consequence, that the time he spent glided swiftly, almost unnoticed. I had him all to myself, *tête-à-tête*.

“I had almost forgotten to tell you I had yesterday a present of a most beautiful bouquet. I

wore it to church in the afternoon ; but it has withered and faded,

‘Withered like the world’s treasures,  
Faded like the world’s pleasures.’”

From the sort of mystical, girl-like allusions in the above extracts, to persons whose initials only are given, to bouquets and *tête-à-têtes*, we infer that she thus early had declared lovers. Even at this age, for she was not yet sixteen, her mother says she had resolved never to marry. “Her reasons,” continues her mother, “for this decision, were, that her peculiar habits, her entire devotion to books and scribbling (as she called it), unfitted her for the care of a family. She could not do justice to husband or children while her whole soul was absorbed in literary pursuits ; she was not willing to resign them for any man, therefore she had formed the resolution to lead a single life ;” a resolution that would have lasted probably till she had passed under the dominion of a stronger passion than her love for the Muses. With affections like hers, and a most lovely person and attractive manners, her resolution would scarcely have enabled her to escape the common destiny of her sex.

The following is an extract from a letter written after participating in several gay parties ;

“Indeed, my dear father, I have turned round

like a top for the last two or three weeks, and am glad to seat myself once more in my favorite corner. How, think you, should I stand it to be whirled in the giddy round of dissipation ? I come home from the blaze of light, from the laugh of mirth, the smile of complaisance and seeming happiness, and the vision passes from my mind like the brilliant, but transitory hues of the rainbow ; and I think with regret on the many, very many happy hours I have passed with you and Anne. Oh, I do want to see you, indeed I do. You think me wild, thoughtless, and perhaps unfeeling ; but I assure you I can be sober, I *sometimes* think, and I *can* and *do* feel. Why have you not written ? Not one word in almost three weeks ! Where are your promises of punctual correspondence ? Mamma feels almost distracted. ‘They have forgotten me !’ she said to-day when the boat arrived and brought no letter, and burst into tears. Oh, do write.”

“ Dear brother and sister, I must write ; but, dear Anne, I am now doomed to dim your eye and cloud your brow, for I know, that what I have to communicate will surprise and distress you. Our dear, dear cousin John is dead ! Oh, I need not tell you how much, how deeply he is lamented. You knew him, and, like every one else who did, you loved him. Poor Eliza ! how my heart aches for her ! her father, her mother, her brother, all

gone, almost the last, the dearest tie is broken which bound her to life. What a vacancy must there be in her heart. How fatal would it prove to almost every hope in life, were we allowed even a momentary glimpse of futurity ! for often half the enjoyments of life consist in the anticipation of pleasures, which may never be ours."

Soon after this, Lucretia witnessed the death of a beloved young friend. It was the first death she had seen, and it had its natural effect on a reflecting and sensitive mind. Her thoughts wandered through eternity by the light of religion, the only light that penetrates beyond the death-bed. She wrote many religious pieces ; but, as I hope another volume of her poems will be given to the public, I have merely selected the following.

"OH that the eagle's wing were mine,  
I 'd soar above the dreary earth;  
I 'd spread my wings, and rise to join  
The immortal fountain of my birth.

"For what is joy ? How soon it fades,  
The childish vision of an hour !  
Though warm and brilliant are its shades,  
'T is but a frail and fading flower.

"And what is hope ? It is a light  
Which leads us on, deluding ever,  
Till lost amid the shades of night  
We sink, and then it flies for ever.

“And what is love? It is a dream,  
 A brilliant fable framed by youth;  
 A bubble dancing on life’s stream,  
 And sinking ’neath the eye of truth.

“And what are honor, glory, fame,  
 But death’s dark watch-words to the grave?  
 The victim dies, and lo! his name  
 Is stamped in life’s red-rolling wave.

“And what are all the joys of life,  
 But vanity, and toil, and woe?  
 What but a bitter cup of grief,  
 With dregs of sin and death below?

“This world is but the first dark gate  
 Unfolded to the wakening soul;  
 But Death unerring, led by Fate,  
 Shall Heaven’s bright portals backward roll.

“Then shall this unchained spirit fly  
 On, to the God who gave it life;  
 Rejoicing, as it soars on high,  
 Released from danger, doubt, and strife.

“There will it pour its anthems forth,  
 Bending before its Maker’s throne,  
 The great I AM, who gave it birth,  
 The Almighty God, the dread Unknown.”

During this winter her application to her books was so unremitting, that her parents again became alarmed for her health, and persuaded her occasionally to join in the amusements of Plattsburg. She came home one night at twelve o’clock from

a ball ; and, after giving a most lively account of all she had seen and heard to her mother, who, as usual, had been sitting up for her, she quietly seated herself at the table, and wrote her "Reflections after leaving a Ball-room." Her spirit, though it glided with kind sympathies into the common pleasures of youth, never seemed to relax its tie to the spiritual world.

During the summer of 1824, Captain Partridge visited Plattsburg with his soldier-scholars. Military display had its usual exciting effect on Miss Davidson's imagination, and she addressed "To the Vermont Cadets" the following spirited stanzas, which might have come from the martial Clorinda.

" PASS on ! for the bright torch of glory is beaming ;  
Go, wreath round your brows the green laurels of  
fame ;

Around you a halo is brilliantly streaming,  
And history lingers to write down each name.

" Yes ; ye are the pillars of Liberty's throne ;  
When around you the banner of glory shall wave,  
America proudly shall claim you her own ;  
And Freedom and Honor shall pause o'er each grave.

" A watch-fire of glory, a beacon of light,  
Shall guide you to honor, shall point you to fame ;  
The heart that shrinks back, be it buried in night,  
And withered with dim tears of sorrow and shame.

"Though death should await you, 't were glorious to die  
With the glow of pure honor still warm on the brow ;  
With a light sparkling brightly around the dim eye,  
Like the smile of a spirit still lingering below.

"Pass on ! and when War in his strength shall arise,  
Rush on to the conflict, and conquer or die ;  
Let the clash of your arms proudly roll to the skies ;  
Be blest, if victorious, — and cursed, if you fly !"

It was about this time that she finished "Amir Khan," and began a tale of some length, which she entitled "The Recluse of the Saranac." Amir Khan has long been before the public, but we think it has suffered from a general and very natural distrust of precocious genius. The versification is graceful, the story beautifully developed, and the Orientalism well sustained. We think it would not have done discredit to our best popular poets in the meridian of their fame. As the production of a secluded girl of fifteen, it seems *prodigious*. On her mother accidentally discovering and reading a part of her romance, Lucretia manifested her usual shrinkings, and with many tears exacted a promise that she would not again look at it till it was finished. She never again saw it till after her daughter's death. Lucretia had a most whimsical fancy for pasting narrow slips of paper together, and writing on both sides ; and once playfully boasting to her mother of having written some *yards* of poetry, she produced

a roll, and, forbidding her approach, she measured off twenty yards !

She continued her favorite employments, but now with a secret disquietude that did not escape Mrs. Davidson's vigilant eye. She claimed her child's unqualified confidence, and Lucretia, laying her head on her mother's bosom, and weeping bitterly, confessed her irrepressible longings for more effective means and helps to pursue her studies. " Dear mamma," she said, " had I but half the advantages which I see others slighting, I should be the happiest of the happy. I am now sixteen years old, and what do I know ? Nothing ! nothing, indeed, compared with what I have yet to learn. The time is rapidly passing, allotted to the improvement of youth, and how dark are my prospects in regard to the favorite wish of my heart !" Her mother, instead of remonstrating, wept with her, and her sympathy was more efficacious than the most elaborate reasoning upon the futility and extravagance of her child's desires. " She became more cheerful," says her mother, " though it was still apparent that her heart was ill at ease."

She often expressed a wish to spend one fortnight alone, even to the exclusion of her little pet sister ; and Mrs. Davidson, eager to afford her every gratification in her power, had a room prepared for her recess. Her dinner was sent up to

her. She declined coming down to tea, and her mother, on going to her apartment, found her writing, her plate untouched. Some secret joy it was natural the mother should feel at this devotion to intellectual pleasure ; but her good sense, or her maternal anxiety, got the better of it, and she persuaded Lucretia to consent to the interruption of a daily walk. It was during one of these walks, that she was first seen by the gentleman who was destined to govern the brief space of life that remained to her. His benevolent mind had been interested by the reputation of her genius and loveliness, and no wonder that the beautiful form in which it was enshrined should have called this interest into sudden and effective action. Miss Davidson was just sixteen. Her complexion was the most beautiful brunette, clear and brilliant, of that warm tint that seems to belong to lands of the sun rather than to our chilled regions. Indeed, her whole organization, mental as well as physical, her deep and quick sensibility, her early developement, were characteristics of a warmer clime than ours. Her stature was low, her form slight and symmetrical, her hair profuse, dark, and curling, her mouth and nose regular, and as beautiful as if they had been chiselled by an inspired artist ; and through this fitting medium beamed her angelic spirit.

The gentleman, to whom we have alluded, at

once determined to give to this rich gem whatever polishing could be given by adventitious circumstances. He went to her father's house, offered to take her under his protection, and to give her every facility for education that could be obtained in this country. Some conversation ensued, as to different institutions for education, and Mrs. Willard's celebrated school at Troy was decided on. " You do not know, Sir," says her mother, in a letter to Lucretia's patron, written long after, " the gratitude, the depth of feeling, which your disinterested conduct excited in our lamented child. She had left the room when you went away ; I followed her. She had thrown herself into a chair. Her face was as pale as death ; I took her hands in mine ; they were as cold as marble. I spoke, she made no reply, and I discovered she had fainted ! After the application of suitable remedies, she began to recover," continues her mother, " and burst into tears, and wept long and violently. When she was sufficiently composed, I asked her if she was willing to accept your generous offer. ' Oh yes, mamma ! oh yes ! but my feelings overpower me.' "

On the same evening she wrote the following letter to her brother and sister.

" What think you ? ' Ere another moon shall fill round as my shield,' I shall be at Mrs. Willard's Seminary. A kind and generous friend has invited, yes, urged me, to accept an offer so

every way advantageous to myself; and his benevolent offer has been accepted. In a fortnight I shall probably have left Plattsburg, not to return at least until the expiration of six months. Oh! I am so happy! so delighted! I shall scarcely eat, drink, or sleep for a month to come. You and Anne must both write to me often, and you must not laugh when you think of poor Luly in the far-famed city of Troy, dropping handkerchiefs, keys, gloves, &c., in short, something of every thing I have. It is well if you can read what I have written, for papa and mamma are talking, and my head whirls like a top. Oh! how my poor head aches! Such a surprise as I have had!"

On the 24th of November, 1824, she left home, health on her cheek and in her bosom, and flushed with the most ardent expectations of getting rapidly forward in the career her desires were fixed upon. But even at this moment her fond devotion to her mother was beautifully expressed in some stanzas, which she left where they would meet her eye as soon as the parting tears were wiped away. These stanzas are already published, and I shall only quote two from them, striking for their tenderness and truth.

"To thee my lay is due, the simple song  
Which nature gave me at life's opening day,  
To thee these rude, these untaught strains belong,  
Whose heart, indulgent, will not spurn my lay.

“Oh say, amid this wilderness of life,  
What bosom would have throbbed like thine for me ?  
Who would have smiled responsive ? Who in grief  
Would e'er have felt, and feeling grieved like thee ?”

The following extracts from her letters, which were always filled with yearnings for home, will show that her affections were the strong-hold of her nature.

“ *Troy Seminary, December 6th, 1824.* Here I am at last; and what a naughty girl I was, when I was at Aunt Schuyler’s, that I did not write you every thing ! But to tell the truth, I was topsy-turvy, and so I am now ; but, in despite of calls from the young ladies, and of a hundred new faces, and new names which are constantly ringing in my ears, I have set myself down, and will not rise until I have written an account of every thing to my dear mother. I am contented ; yet, notwithstanding, I have once or twice turned a wishful glance towards my dear-loved home. Amidst all the parade of wealth, in the splendid apartments of luxury, I can assure you, my dearest mother, that I had rather be with you *in our own lowly home*, than in the midst of all this ceremony.”

“ Oh, mamma, I like Mrs. Willard. ‘ And so this is my girl, Mrs. Schuyler ? ’ said she, and took me affectionately by the hand. Oh, I want to see you so much ! But I must not think of it now. I must learn as fast as I can, and think only of my

studies. Dear, dear little Margaret ! kiss her and the little boys for me. How is dear father getting on in this rattling world?"

The letters that followed were tinged with melancholy from her "bosom's depth," and her mother has withheld them. In a subsequent one she says, "I have written two long letters ; but I wrote when I was ill, and they savor too much of sadness. I feel a little better now, and have again commenced my studies: Mr. \_\_\_\_\* called here to-day. Oh, he is very good ! He stayed some time, and brought a great many books ; but I fear I shall have little time to read aught but what appertains to my studies. I am consulting Kames's 'Elements of Criticism,' studying French, attending to Geological lectures, composition, reading, paying some little attention to painting, and learning to dance."

A subsequent letter indicated great unhappiness and debility, and awakened her mother's apprehensions. The next was written more cheerfully. "As I fly to you," she says, "for consolation in all my sorrows, so I turn to you, my dear mother, to participate all my joys. The clouds that envel-

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\* This hiatus should be filled with the name of her benefactor; but, as his patronage was marked with the delicacy that characterizes true generosity, I cannot, without his expressed permission, publish his name. The world's praise could be little to him, who enjoyed the gratitude of this young earthly angel.

oped my mind have dispersed, and I turn to you with a far lighter heart than when I last wrote. The ever kind Mr. —— called yesterday." She then describes the paternal interest her benefactor took in her health and happiness, expresses a trembling apprehension lest he should be disappointed in the amount of her improvement, and laments the loss of time from her frequent indispositions. "How, my dear mother," she says, "shall I express my gratitude to my kind, my excellent friend? What is felt as deeply as I feel this obligation, *cannot* be expressed; but I can feel, and *do* feel." It must be remembered that these were not formal and obligatory letters to her benefactor, but the spontaneous overflowing of her heart in her private correspondence with her mother.

We now come to a topic, to which we would ask the particular attention of our readers. Owing to many causes, but chiefly, we believe, to the demand for operatives in every department of society in our country, the work of *school* education is crowded into a very few years. The studies, instead of being selected, spread through the whole circle of the sciences. The school period is the period of the young animal's physical growth and developement; the period when the demands of the physical nature are strongest, and the mental weakest. Then our young men

are immured in colleges, law schools, divinity schools, &c., and our young ladies in boarding-schools, where, even in the best regulated, the provisions for exercise in the open air are very insufficient. In the city schools, we are aware, that the difficulties to be overcome to achieve this great object are nearly insuperable, we believe quite so; and, if they are so, should not these establishments be placed in the country? Are not health and physical vigor the basis of mental health and vigor, of usefulness and happiness? What a proportion of the miseries of the more favored classes of our females result from their *invalidism*! What feebleness of purpose, weakness of execution, dejection, fretfulness, mental and moral imbecility!

The case would not be so bad, if the misery ended with one generation, with the mother, cut off in the midst of her days, or dragging on, to threescore and ten, her unenjoyed and profitless existence. But that it is not so, there are hosts of living witnesses in the sickly, pale, drooping children of our nurseries. There are multitudes who tell us, that our climate will not permit a delicate female to exercise in the open air. If the climate is bad, so much the more important is it to acquire strength to resist it. Besides, if out-of-doors exercise is not at all times attractive, we know it is not impossible. We *know* delicately

bred females, who, during some of our hardest winters, have not for more than a day or two lost their exercise abroad. When, in addition to the privation of pleasurable exercise, (for the walk in funeral procession, attended by martinets, and skewered by city decorums, can scarcely be called *pleasurable*,) the school girl is confined to her tasks from eight to ten hours in rooms sometimes too cold, sometimes too hot, where her fellow sufferers are *en masse*, can we wonder at the result?

How far this evil may have operated in shortening the life of Lucretia Davidson, we cannot say; but we cannot but think, that her devoted and watchful friend erred in sending a creature so delicate in her construction to any boarding-school, even the best-conducted institution. We certainly do not mean to express or imply any censure of the "Troy Seminary." We have no personal knowledge of it; but we believe no similar institution has more the confidence of the community; and, as it has been now many years established and tried, it is fair to believe it deserves it.

An arrangement of these boarding-schools, that bore very hard upon Miss Davidson, was the public examination.\* These examinations are

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\* I did not intend remarking upon the influence these examinations have on the scholar's progress; but I cannot forbear quoting the following pertinent passage from President Hopkins's Inaugural Address. "There are

appalling to a sensitive mind. Could they be proved to be of manifest advantage to the scholarship of the young ladies, we should doubt their utility on the whole. But, even where they are conducted with perfect fairness, are they a test of scholarship? Do not the bold outface, and the indolent evade them? The studious are stimulated, and the sensitive and shrinking, if stimulated, are appalled and disconcerted by them; so that the condiment affects those only, whose appetites are already too keen.

But the experience of Miss Davidson is more persuasive than any reasoning of ours, and we shall give it in her own language, in occasional extracts from her letters to her mother.

"We now begin to dread the examination. Oh, horrible! seven weeks, and I shall be posted up before all Troy, all the students from Schenectady, and perhaps five hundred others. What shall I do?"

"I have just received a note from Mr. ——, in which he speaks of your having written to him of my illness. I was indeed ill, and very ill for

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not wanting schools in this country, in which the real interests and progress of the pupils are sacrificed to their appearance at examination. But the vanity of parents must be flattered, and the memory is overburdened, and studies are forced on prematurely, and a system of infant-school instruction is carried forward into maturer life."

several days, and in my deepest dejection wrote to you ; but do not, my dearest mother, be alarmed about me. My appetite is not perfectly good, but quite as well as when I was at home. Mr. —'s letter was accompanied by a French Testament. The letter was just such a one as was calculated to soothe my feelings, and set me completely at rest, and I begin to think he is truly my 'guardian angel.' He expressed a wish that my stay here should be prolonged. What think you, mother ? I should be delighted by such an arrangement. This place really seems quite like a home to me, though not *my own dear home*. I like Mrs. Willard, I love the girls, and I have the vanity to think I am not actually disagreeable to them."

We come now to another expression (partly serious, and partly bantering, for she seems to have uniformly respected her instructress) of her terrors of "examination."

"We are all engaged, heart and hand, preparing for this awful examination. Oh, how I dread it ! But there is no retreat. I must stand firm to my post, or experience all the anger, vengeance, and punishment, which will, in case of delinquency or flight, be exercised with the most unforgiving acrimony. We are in such cases excommunicated, henceforth and for ever, under the awful ban of holy Seminary ; and the evil eye of false report

is upon us. Oh mamma, I do though, jesting apart, dread this examination ; but nothing short of real and absolute sickness can excuse a scholar in the eyes of Mrs. Willard. Even that will not do it to the Trojan world around us ; for, if a young lady is ill at examination, they say with a sneer, ‘Oh, she is ill of an examination fever !’ Thus you see, mamma, we have no mercy either from friends or foes. We must ‘*do or die.*’ Tell Morris he must write to me. Kiss dear, dear little Margaret for me, and don’t let her forget *poor sister Luly*, and tell all who inquire for me that I am well, but in awful dread of a great examination.”

The following extract is from a letter to her friends, who had written under the impression, that all letters received by the young ladies were, of course, read by some one of the officers of the institution.

“ Lo ! just as I was descending from the third story, (for you must know I hold my head high,) your letter was put into my hands. Poor little wanderer ! I really felt a sisterly compassion for the poor little folded paper. I kissed it for the sake of those who sent it forth into the wide world, and put it into my bosom. But oh, when I read it ! Now, Anne, I will tell you the truth ; it was cold, perhaps it was written on one of your cold Canada days, or perchance it lost a little heat on

the way. It did not seem to come from the very heart of hearts ; it looked as though it were written ‘to a young lady at the Troy Seminary,’ not to your dear, dear, *dear sister Luly.* Mr. —— has thus far been a father to me, and I thank him ; but I will not mock my feelings by attempting to say how much I thank him. I can never do them justice. What inducement can he have to do what he is now doing ? I know of none. Personal merit on my part is out of the question. His heart is naturally benevolent ; he wishes to do good ; he saw me, and by some unaccountable means I am where I am. The *Father* of those, who are in adversity struggling against despair, undoubtedly should receive my heart-felt thanks and praises as the original, the moving cause of all these blessings ; and I hope they are as mercifully received as they are sincerely given.”

“ My dear mother ! oh how I wish I could lay my head upon your bosom ! I hope you do not keep my letters, for I certainly have burned all yours,\* and I stood like a little fool and wept over their ashes, and, when I saw the last one gone, I felt as though I had parted with my last friend.” Then, after expressing an earnest wish that her mother would destroy her letters, she says, “ They have no connexion. When I

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\* This was in consequence of a positive command from her mother.

write, every thing comes crowding upon me at once ; my pen moves too slow for my brain and my heart, and I feel vexed at myself, and tumble in every thing together, and a choice medley you have of it."

"I attended Mr. Ball's public [assembly] last night, and had a delightful evening ; but now for something of more importance, *Ex-am-i-na-tion!* I had just begun to be engaged, heart and hand, preparing for it, when, by some means, I took a violent cold. I was unable to raise my voice above a whisper, and coughed incessantly. On the second day Mrs. Willard sent for Dr. Robbins ; he said I must be bled, and take an emetic ; this was sad ; but, oh mamma, I could not speak nor breathe without pain." There are farther details of pains, remedies, and consequent exhaustion ; and yet this fragile and precious creature was permitted by her physician and friends, kind and watchful friends too, to proceed in her suicidal preparations for examination ! There was nothing uncommon in this injudiciousness. Such violations of the laws of our physical nature are every day committed by persons, in other respects, the wisest and the best, and our poor little martyr may not have suffered in vain, if her experience awakens attention to the subject.

In the letter, from which we have quoted above, and which is filled with expressions of love for the

dear ones at home, she thus continues ; "Tell Morris I will answer his letter in full next quarter ; but now I fear I am doing wrong, for I am yet quite feeble, and when I get stronger I shall be very avaricious of my time, in order to prepare for the coming week. We must study morning, noon, and night. *I shall rise between, two and four now every morning, till the dreaded day is past.* I rose the other night at twelve, but was ordered back to bed again. You see, mamma, I shall have a chance to become an early riser here." "Had I not written you that I was coming home, I think I should not have seen you this winter. All my friends think I had better remain here, as the journey will be long and cold ; but oh ! there is that at the journey's end, which would tempt me through the wilds of Siberia,—father, mother, brothers, sister, *home*. Yes, I shall come."

We insert some stanzas, written about this time, not so much for their poetical merit, as for the playful spirit that beams through them, and which seems like sunbeams smiling on a cataract.

#### A WEEK BEFORE EXAMINATION.

"ONE has a headache, one a cold,  
One has her neck in flannel rolled ;  
Ask the complaint, and you are told,  
'Next week 's examination.'

"One frets and scolds, and laughs and cries,  
Another hopes, despairs, and sighs ;  
Ask but the cause, and each replies,  
'Next week 's examination.'

“One bans her books, then grasps them tight,  
And studies morning, noon, and night,  
As though she took some strange delight  
In these examinations.

“The books are marked, defaced, and thumbed,  
The brains with midnight tasks benumbed,  
Still all in that account is summed,  
‘Next week’s examination !’ ”

In a letter of February 10th, she says, “The dreaded work of examination is now going on, my dear mother. To-morrow evening, which will be the last, and is always the most crowded, is the time fixed upon for my *entrée* upon the field of action. Oh ! I hope I shall not disgrace myself. It is a rule here to reserve the best classes till the last ; so I suppose I may take it as a compliment that we are delayed.”

“*February 12th.* The examination is over. E—— E—— did herself and her native village honor ; but as for your poor Luly, she acquitted herself, I trust, decently. Oh ! mamma, I was so frightened ! but, although my face glowed and my voice trembled, I did make out to get through, for I knew my lessons. The room was crowded almost to suffocation. All was still, the fall of a pin could have been heard, and I tremble when I think of it even now.” No one can read these melancholy records without emotion.

Her visit home during the vacation was given up, in compliance with the advice of her guardian.

"I wept a good long hour or so," she says, with her characteristic gentle acquiescence, "and then made up my mind to be content."

In her next letter she relates an incident very striking in her uneventful life. It occurred in returning to Troy, after her vacation, passed happily with her friends in the vicinity. "Uncle went to the ferry with me," she says, "where we met Mr. Paris. Uncle placed me under his care, and, snugly seated by his side, I expected a very pleasant ride, with a very pleasant gentleman. All was pleasant, except that we expected every instant that all the ice in the Hudson would come drifting against us, and shut in scow, stage, and all, or sink us to the bottom, which, in either case, you know, mother, would not have been quite so agreeable. We had just pushed from the shore, I watching the ice with anxious eyes, when, lo ! the two leaders made a tremendous plunge, and tumbled headlong into the river. I felt the carriage following fast after ; the other two horses pulled back with all their power, but the leaders were dragging them down, dashing and plunging, and floundering in the water. 'Mr. Paris, in mercy let us get out !' said I. But, as he did not see the horses, he felt no alarm. The moment I informed him they were overboard, he opened the door and cried, 'Get out and save yourself, if possible ; I am old and stiff, but I will follow in an instant.'

'Out with the lady ! let the lady out !' shouted several voices at once ; 'the other horses are about to plunge, and then all will be over.' I made a lighter spring than many a lady does in a cotillon, and jumped upon a cake of ice. Mr. Paris followed, and we stood, (I trembling like a leaf,) expecting every instant that the next plunge of the drowning horses would detach the piece of ice upon which we were standing, and send us adrift ; but, thank Heaven, after working for ten or fifteen minutes, by dint of ropes and cutting them away from the other horses, they dragged the poor creatures out more dead than alive.

"Mother, don't you think I displayed some courage ? I jumped into the stage again, and shut the door, while Mr. Paris remained outside, watching the movement of affairs. We at length reached here, and I am alive, as you see, to tell the story of my woes."

In her next letter she details a conversation with Mrs. Willard, full of kind commendation and good counsel. "Mamma," she concludes, "you would be justified in thinking me a perfect lump of vanity and egotism ; but I have always related to you every thought, every action, of my life. I have had no concealments from you, and I have stated these matters to you because they fill me with surprise. Who would think the accomplished Mrs. Willard would admire my poor daubing, or

my poor any thing else! Oh, dear mamma, I am so happy now! so contented! Every unusual movement startles me, I am constantly afraid of something to mar it."\*

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\* This letter manifests strikingly, what all her letters indicate, her entire unconsciousness of superiority, her freedom from vanity, or any approach even to self-complacency. I insert here some extracts from a very interesting letter from Mrs. Willard, with which I was favored too late to incorporate it in the narrative.

"Though you have doubtless more exact descriptions of Miss Davidson, than I shall be able, after the lapse of so many years, to afford, yet I will give you truly my impressions concerning her. They may be of some value, as they are formed with the advantage of extensive comparison with those of her own age, known under similar circumstances.

"Miss Davidson was scarcely of a middling height, delicately formed, with regular features, a fine roseate bloom, bright, round black eyes, and dark brown hair, which flowed in fine curls about her face. She had all the elements of personal beauty; yet she was so excessively shy, that many a girl, less perfectly endowed in that respect, would be sooner noticed by a stranger. Her fine eyes, especially in the presence of those with whom she was not familiar, would be bent downwards; and there was a certain shrinking of her person, as if she would fain make herself so little as not to be seen.

"From the same excessive timidity she would, under the same circumstances, shrink her mind as well as her person; not conversing fluently, or bringing out in speech those flashes of fancy, and that delicacy of sentiment, which marked her written compositions. Hence her

The next extract is from a letter, the emanation of her affectionate spirit, to a favorite brother seven years old.

" Dear L——, I am obliged to you for your two very interesting epistles, and much doubt whether I could spell more ingeniously myself. Really, I have some idea of sending them to the printer's, to be struck off in imitation of a Chinese puzzle. Your questions about the stars I have been cogitating upon for some time past, and am of the

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teachers did not find her recitations brilliant, although well satisfied that she understood her author. There was also a degree of irregularity in her performances, her mind operating at different times with different degrees of force. I recollect that she was a fine scholar in Kames's 'Elements of Criticism.' She was studying that work at the same time with Paley's 'Moral Philosophy.' Her companions found Paley a much easier author to understand. This surprised Miss Davidson, who found Kames much less difficult, because, she said, the work was more connected. It was in truth more connected with her internal sensibilities. The 'ideal presence' of Kames was more congenial to her, than the 'general consequences' of Paley. She loved better to dwell in the high regions of imagination and taste, than in the lower but more extensive world of common things.

" However it might be with her recitations, she soon became distinguished in school by her compositions. My sister, Mrs. Lincoln (now Mrs. Phelps), superintended the class in that branch of which Miss Davidson was a member. I well remember the high satisfaction with

opinion, that, if there are beings inhabiting those heavenly regions, they must be content to feed, cameleon-like, upon air; for, even were we disposed to spare them a portion of our earth sufficient to plant a garden, I doubt whether the attraction of gravitation would not be too strong for resistance, and the unwilling clod return to its pale brethren of the valley, ‘to rest in ease inglorious.’ So far from burning your precious letters, my dear little brother, I carefully preserve them in a little pocket-book, and when I feel lonely and desolate, and

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which she came to show me one of her first school productions, the subject of which was ‘The Discovery of America.’ But in nothing, not even in poetry, of which some of her finest pieces were written here, did she evince the superiority of her genius, more than in drawing and painting; and I am convinced that she wanted nothing but practice, with some good instruction, to have painted in a style as elegant, and as peculiarly her own, as were her finest literary productions. In several respects she would improve upon the copies given her. She not only seemed to seize the artist’s idea, and to know exactly what effect he wished to produce; but she brought out from her own imagination more picturesque forms, and sometimes fine touches which were quite original. I speak of Miss Davidson’s painting, not in comparison with those of the practised artist, but with those of other school-girls, and of the many who have been under my instruction.

“I do not now recollect one, of whose native genius I had so high an opinion; although we have had many who, in consequence of much more practice and instruc-

think of my dear home, I turn them over and over again. Do write often, my sweet little correspondent, and believe me," &c. &c.

Her next letter to her mother, written in March, was in a melancholy strain; but, as if to avert her parent's consequent anxieties, she concludes,

"I hope you will feel no concern for my health or happiness; for, save the thought of my dear mother and her lonely life, and the idea that my dear father is vainly spending his time and talents in fruitless exertions for his helpless family, save

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tion, have made better performances. The native uneducated poet brings forth the inspirations of his genius in words. These he uses from his infancy, and, though his stock may be comparatively small, yet of this stock he may perfectly apprehend the meaning and use. Not so with the uninstructed genius in painting. However delightful and original the forms with which his imagination may be stored, he must *learn* the medium of lines and shades and colors, before he can develope them to others. Miss Davidson, I am persuaded, had but to do this, to become eminent in painting.

"Lucretia's moral nature was exquisitely touched with all the finer sensibilities. She loved with the utmost tenderness those who loved her, and were kind to her; and she loved those who were good, and the more, if they were unfortunate. Hence a fund of genuine affection arose for her, in the hearts of her companions, and among *them* her conversation was entertaining, and often witty. To amuse them she sometimes wrote, as well as talked. Her 'Examination' poem was thus produced, which was, at the time, much quoted and copied among the young ladies."

these thoughts (and I assure you, mamma, they come not seldom), I am happy. Do, my dear mother, try to be cheerful, and have good courage."

"I have been to the Rensselaer school, to attend the philosophical lectures. They are delivered by the celebrated Mr. Eaton, who has several students, young gentlemen. I hope they will not lose their hearts among twenty or thirty pretty girls. For my part, I kept my eyes fixed as fast as might be upon the good old lecturer, as I am of the opinion, that he is the best possible safeguard, with his philosophy and his apparatus ; for you know philosophy and love are sworn enemies !"

Miss Davidson returned to Plattsburg during the spring vacation. Her mother, when the first rapture of reunion was over, the first joy at finding her child unchanged in the modesty and naturalness of her deportment, and fervor of her affections, became alarmed at the indications of disease, in the extreme fragility of her person, and the deep and fluctuating color of her cheek. Lucretia insisted, and, deceived by that ever-deceiving disease, believed she was well. She was gay and full of hope, and could hardly be persuaded to submit to her father's medical prescriptions. During her stay at home she wrote a great deal. Like the bird, which is to pass away with the summer, she seems to have been ever on the

wing, pouring forth the spontaneous melodies of her soul. The following are a few stanzas from a piece "On Spring."

"I have seen the fair Spring, I have heard her sweet song,

As she passed in her lightness and freshness along;  
The blue wave rolled deeper, the moss-crest looked bright,

As she breathed o'er the regions of darkness and night.

"I have seen the rose bloom on the youthful cheek,  
And the dew of delight 'neath the bright lash break;  
The bounding footstep, scarce pressing the earth,  
And the lip which speaks of a soul of mirth.

"I have seen the Winter with brow of care,  
With his soulless eye and his snow-white hair;  
And whate'er his footsteps had touched was cold,  
As the lifeless stone which the sculptors mould.

\* \* \* \* \*

"As I knelt by the sepulchre, dreary and lone,  
Lay the beautiful form in its temple of stone;  
I looked for its coming,— the warm wind passed by,—  
I looked for its coming on earth and on high.

"The young leaves gleamed brightly around the cold spot;

I looked for the spirit, yet still it came not.

Shall the flower of the valley burst forth to the light,  
And man in his beauty lie buried in night?

"A voice on the waters, a voice in the sky,  
A voice from beneath, and a voice from on high,  
Proclaims that he shall not; that Spring, in her light,  
Shall waken the spirit from darkness and night."

These were singular speculations for a beautiful girl of sixteen. Were there not spirits ministering to her from that world to which she was hastening?

The physician, called in to consult with her father, was of opinion that a change of air and scene would probably restore her, and it was decided that she should *return to school!* Miss Gilbert's boarding-school at Albany was selected for the next six months. There are few more of her productions of any sort, and they seem to us to have the sweetness of the last roses of summer. The following playful passages are from her last letter at home to her sister in Canada.

"The boat will be here in an hour or two, and I am all ready to start. Oh, I am half sick. I have taken several doses of something quite délectable for a visiting-treat. Now," she concludes her letter, "by your affection for me, by your pity for the wanderer, by your remembrance of the absent, by your love for each other, and by all that is sacred to an absent friend, I charge you, write to me, and write often. As ye hope to prosper, as ye hope your boy to prosper (and grow fat!), as ye hope for my gratitude and affection now and hereafter, I charge you, write. If ye sinfully neglect this last and solemn injunction of a parting friend, my injured spirit will visit you in your transgressions. It shall pierce you with goose-quills, and hurl down upon your recreant heads the brim-

ming contents of the neglected inkstand. This is my threat, and this my vengeance. But if, on the contrary, ye shall see fit to honor me with numerous epistles, which shall be duly answered, know ye, that I will live and love you, and not only you, but your boy. You now see that upon your bearing depends the fate of your little boy, 'to be beloved, or not to be beloved !' They have come ! Farewell, a long farewell !"

She proceeded to Albany, and in a letter dated May 12th, 1825, she seems delighted with her reception, accommodations, and prospects at Miss Gilbert's school. She has yet no anxieties about her health, and enters on her career of study with her customary ardor. With the most delicate health and constant occupation, she found time always to write long letters to her mother, and the little children at home, filled with fond expressions. What an example and rebuke to the idle school-girl, who finds no time for these minor duties ! But her studies, to which she applied herself beyond her strength, from the conscientious fear of not fulfilling the expectations of her friends, were exhausting the sources of life. Her letters teem with expressions of gratitude to her benefactor, to Miss Gilbert, and to all the friends around her. She complains of debility and want of appetite, but imputes all her ailings to not hearing regularly from home. The mails, of course, were

at fault, for her mother's devotion never intermitted. The following expressions will show that her sensibility, naturally acute, was rendered intense by physical disease and suffering.

"Oh, my dear mother, cannot you send your *Luly* one little line. Not one word in two weeks! I have done nothing but weep all day long. I feel so wretchedly! I am afraid you are ill."

"I am very wretched, indeed I am. My dear mother, am I never to hear from you again? I am *homesick*. I know I am foolish; but I cannot help it. To tell the truth, I am half sick. I am so weak, so languid, I cannot eat. I am nervous, I know I am; I weep the most of the time. I have blotted the paper so, that I cannot write. I cannot study much longer, if I do not hear from you."

Letters from home renovated her for a few days, and, at Mr. ——'s request, she went to the theatre, and gave herself up, with all the freshness of youthful feeling, to the spells of the drama, and raved about Hamlet and Ophelia like any other school-girl.

But her next letter recurs to her malady, and, for the first time, she expresses a fear that her disease is beyond the reach of common remedies. Her mother was alarmed, and would have gone immediately to her, but she was herself confined to her room by illness. Her father's cooler judg-

ment inferred from their receiving no letters from Lucretia's friends, that there was nothing serious in her disease.

The next letter removed every doubt. It was scarcely legible ; still she assures her mother she is better, and begs she will not risk the consequences of a long journey. But neither health nor life weighed now with the mother against seeing her child. She set off, and, by appointment, joined Mr. —— at Whitehall. They proceeded thence to Albany, where, after the first emotions of meeting were over, Lucretia said, "Oh mamma, I thought I should never have seen you again ! But, now I have you here, and can lay my aching head upon your bosom, I shall soon be better."

For a few days the balm seemed effectual ; she was better, and the physicians believed she would recover ; but her mother was no longer to be persuaded from her conviction of the fatal nature of the disease, and arrangements were immediately made to convey her to Plattsburg. The journey was effected, notwithstanding it was during the heats of July, with less physical suffering than was apprehended. She shrunk painfully from the gaze her beauty inevitably attracted, heightened as it was by that disease which seems to delight to deck the victim for its triumph. "Her joy upon finding herself at home," says her mother, "operated, for a time, like magic." The sweet,

health-giving influence of domestic love, the home atmosphere, seemed to suspend the progress of her disease, and again her father, brothers, and friends were deluded ; all, but the mother and the sufferer. She looked, with prophetic eye, calmly to the end. There was nothing to disturb her. That kingdom that cometh ' without observation ' was within her, and she was only about to change its external circumstances, about to put off the harness of life in which she had been so patient and obedient. To the last she manifested her love of books. A trunk filled with them, given to her by her benefactor, had not been unpacked. She requested her mother to open it at her bed-side, and, as each book was given to her, she turned over the leaves, kissed it, and desired to have it placed on a table at the foot of her bed. There they remained to the last, her eye often fondly resting on them.

She expressed a strong desire to see Mr. —— once more, and a fear that, though he had been summoned, he might not arrive in time. He came, however, to receive the last expressions of her gratitude, and to hear the last word pronounced by her lips, his own name.

The "Fear of Madness" was written by her while confined to her bed, and was the last piece she ever wrote. As it constitutes a part of the

history of her disease, it is, though already published, inserted here.

“**T**HREE is a something which I dread ;  
It is a dark, and fearful thing ;  
It steals along with withering tread,  
Or sweeps on wild destruction’s wing.

“**T**hat thought comes o’er me in the hour  
Of grief, of sickness, or of sadness ;  
’T is not the dread of death ; ’t is more,—  
It is the dread of madness.

“**O**h ! may these throbbing pulses pause,  
Forgetful of their feverish course ;  
May this hot brain, which, burning, glows  
With all a fiery whirlpool’s force,

“**B**e cold, and motionless, and still,  
A tenant of its lowly bed ;  
But let not dark delirium steal”—

[*Unfinished.*]

That the records of the last scenes of Lucretia Davidson’s life are scanty, is not surprising. The materials for this memoir, it must be remembered, were furnished by her mother. A victim stretched on the rack cannot keep records. She says, in general terms, “Lucretia frequently spoke to me of her approaching dissolution, with perfect calmness, and as an event that must soon take place. In a conversation with Mr. Townsend, held at intervals, as her strength would permit, she expressed the same sentiments she expressed to

me before she grew so weak. She declared her firm faith in the Christian religion, her dependence on the divine promises, which she said had consoled and sustained her during her illness. She said her hopes of salvation were grounded on the merits of her Savior, and that death, which had once looked so dreadful to her, was now divested of all its terrors."

Welcome, indeed, should that messenger have been, that opened the gates of knowledge, and blissful immortality, to such a spirit !

During Miss Davidson's residence in Albany, which was less than three months, she wrote several miscellaneous pieces, and began a long poem, divided into cantos, and entitled "Mari-torne, or the Pirate of Mexico." This she deemed better than any thing she had previously produced. The amount of her compositions, considering the shortness and multifarious occupations of a life of less than seventeen years, is surprising.\* We copy the subjoined paragraph from the biographical sketch prefixed to "Amir Khan." "Her poetical writings, which have been collected, amount in all to two hundred and seventy-eight pieces, of various lengths. When it is considered that there are among these at least five regular poems of several cantos each, some esti-

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\* She died on the 27th of August, 1825, just a month before her seventeenth birth-day.

mate may be formed of her poetical labors. Besides these were twenty-four school exercises, three unfinished romances, a complete tragedy, written at thirteen years of age, and about forty letters, in a few months, to her mother alone." This statement does not comprise the large proportion (at least one third of the whole) which she destroyed.

The genius of Lucretia Davidson has had the meed of far more authoritative praise than ours. The following tribute is from the London "Quarterly Review"; a source whence praise of American productions is as rare as springs in the desert. The notice is by Mr. Southey, and is written with the earnest feeling, that characterizes that author, as generous as he is discriminating. "In these poems" [Amir Khan, &c.] "there is enough of originality, enough of aspiration, enough of conscious energy, enough of growing power, to warrant any expectations, however sanguine, which the patron, and the friends, and parents of the deceased could have formed."

But, prodigious as the genius of this young creature was, still marvellous after all the abatements that may be made for precociousness and morbid developement, there is something yet more captivating in her moral loveliness. Her modesty was not the infusion of another mind, not the result of cultivation, not the effect of good taste;

nor was it a veil, cautiously assumed and gracefully worn ; but an innate quality, that made her shrink from incense, even though the censer were sanctified by love. Her mind was like the exquisite mirror, that cannot be stained by human breath.

Few may have been gifted with her genius, but all can imitate her virtues. There is a universality in the holy sense of duty, that regulated her life. Few young ladies will be called on to renounce the Muses for domestic service ; but many may imitate Lucretia Davidson's meek self-sacrifice, by relinquishing some favorite pursuit, some darling object, for the sake of an humble and unpraised duty ; and, if few can attain her excellence, all may imitate her in her gentleness, humility, industry, and fidelity to her domestic affections. We may apply to her the beautiful lines, in which she describes one of those

“forms, that, wove in fancy’s loom,  
Float in light visions round the poet’s head.”

“She was a being formed to love and bless,  
With lavish nature’s richest loveliness ;  
Such I have often seen in Fancy’s eye,  
Beings too bright for dull mortality.  
I’ve seen them in the visions of the night,  
I’ve faintly seen them when enough of light  
And dim distinctness gave them to my gaze,  
As forms of other worlds, or brighter days.”

This memoir may be fitly concluded by the following “Tribute to the Memory of my Sister,”

by Margaret Davidson, who was but two years old at the time of Lucretia's death, and whom she so often mentions with peculiar fondness. The lines were written at the age of *eleven*. May we be allowed to say, that the mantle of the elder sister has fallen on the younger, and that she seems to be a second impersonation of her spirit?

“Though thy freshness and beauty are laid in the tomb,  
Like the floweret which drops in its verdure and bloom;  
Though the halls of thy childhood now mourn thee in  
vain,

And thy strains shall ne'er waken their echoes again,

Still o'er the fond memory they silently glide,

Still, still thou art ours, and America's pride.

Sing on, thou pure seraph, with harmony crowned,

And pour the full tide of thy music along,

O'er the broad arch of Heaven the sweet note shall re-sound,

And a bright choir of angels shall echo the song.

The pure elevation which beamed from thine eye,

As it turned to its home in yon fair azure sky,

Told of something unearthly; it shone with the light

Of pure inspiration and holy delight.

Round the rose that is withered a fragrance remains,

O'er beauty in ruins the mind proudly reigns.

Thy lyre has resounded o'er ocean's broad wave,

And the tear of deep anguish been shed o'er thy grave;

But thy spirit has mounted to mansions on high,

To the throne of its God, where it never can die.”



Philadelphia Dec 26<sup>th</sup> 1795

I flatter myself he will be successful in his intended application to the hon Board of Trustees, but I am certain this will much depend on your interest.

I am, Dear Sir, with the sincerest affection  
and esteem, your most obedt servant

Dav: Rittenhouse

L I F E  
OF  
DAVID RITTENHOUSE;  
BY  
JAMES RENWICK, LL. D.



## DAVID RITTENHOUSE.

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### CHAPTER I.

#### *Introduction.*

THE annals of our country are illustrated by but few names of scientific eminence. It has been well remarked, that the energies of our people have been directed by circumstances to objects demanding not less powers of mind, than those required to master the highest subjects in abstract knowledge. To plan constitutions and enact laws for a mighty nation, placed under new circumstances, and to bring, by novel applications of science, the most distant parts of an extensive continent into close and frequent intercourse, are objects as worthy of a master-spirit, as the investigation of the most subtle mathematical problems, or the research of the most recondite physical questions. Yet, as the paucity of our men of science has been urged upon us as a reproach, it behoves us to set a due value upon those whom our country has produced, and who, while their cotemporaries have been engaged in

reclaiming the wilderness, in bringing to light the hidden or dormant riches of our soil, in opening artificial, and improving natural channels of trade, and in extending our commerce to the most distant regions of the globe, have patiently devoted themselves to the less lucrative pursuit of philosophic study. Among these the subject of the present memoir holds no mean place. Were we called upon to assign him a rank among the philosophers whom America has produced, we should place him, in point of scientific merit, as second to Franklin alone. If he wanted the originality and happy talent for discovery, possessed by that highly gifted man, he has the advantage of having applied himself with success to a more elevated department of physical science.

Astronomy, to use the words of Davy, is the most ancient, as it is now the most perfect, of the sciences. Connected with the earliest events even of savage life, the phenomena of the heavenly bodies must have attracted the attention of the progenitors of our species, from the time they were doomed to eat their bread in the sweat of their brow. The waning and increase of the moon, and the connexion of her phases with the varying length of the natural day, have been studied and transmitted from father to son, among even the rudest tribes of hunters; and the wildest Indians of our own country still note them for similar

purposes. At no long interval after the deluge of Noah, the Egyptian husbandmen, who first furrowed the soil, wherein to cast the seeds of the cereal *gramina*, remarked the coincidence of the re-appearance of Sirius in the eastern horizon, with the return of the vivifying waters of the inundation; and from that time to the present, man has not forgotten the use of the heavenly bodies, as signs and as seasons. From the hands of the hunter and the husbandman, astronomy, still in a rude state, passed into those of a priesthood, which, monopolizing the traditions of its more obvious facts, found in them the surest support of its influence, and turned to the purposes of superstition, what had been preserved for general use. Twenty centuries have however elapsed since this science made its escape from the dark cells of the pagan temple, and took up its abode in the observatory of Hipparchus. From that time to the present, in the hands of the Greek, the Arab, the Tartar, and finally in those of the nations of modern Europe, astronomy has made almost annual progress, until it has become, not only the highest triumph of human genius, but the surest test of civilization. It is only by advancing a knowledge of this science, that the men of future generations can hope to place their names by the side of those of a Ptolemy, a Galileo, a Kepler, a Newton, or a

La Place; and it may be almost predicted of a country in which astronomy is cultivated, that it is polished and enlightened; while we may as surely infer, that, when it is neglected, the arts of civilized life have either never made their appearance, or are upon the decline.

In submitting to this test the claims of our country to be considered as enlightened, we might shrink from the task of comparison, or be on the point of admitting her inferiority to several of the nations of Europe, were we not aware that we even now number among our citizens a name inferior to none in the pursuit of celestial mechanics, and may count in the generation, which has just descended to the tomb, the equal, in skill and tact of observation, of Lalande and Maskelyne in the person of the subject of this memoir.

The science of astronomy, cultivated as it has been for so many centuries, and adorned by genius and talents of the highest order, has accumulated to a vast amount. It has therefore demanded a division of labor, in order to admit of its being pursued in any one direction with complete success. When astronomy first became a science, a few verses might comprise all the treasured learning of former observers, and could be easily committed to memory; further progress could be insured by noting phenomena, visible to the naked eye, or measuring the length of the

shadow of a gnomon ; calculation was hardly known as an aid, and instruments had not been invented. At the present day, the whole life may be devoted to the study of physical astronomy alone, in which no other instrument is to be employed than the calculus, and no theory required but the simple laws to which Newton reduced the causes of all the celestial motions. Another may find sufficient occupation in calculating in numbers the formulæ obtained by the physical astronomer, and arranging his results in tables, by which future phenomena may be predicted. A third may found upon these tables the ephemerides by which the practical astronomer is to be guided in his observations. The practical astronomer, on the other hand, need devote himself only to watch for the phenomena of the heavenly bodies, as they are successively presented to him in their varying motions, and thus furnish to the physical astronomer the practical test of his theories, and to calculators the numerical values of the quantities involved in the formulæ. Observation, however, would be beyond measure laborious, were not its proper times predicted in the calculated tables, and is now of no account, unless performed by the most perfect instruments, and aided by the most accurate arithmetic.

The construction of the instruments, which the

practical astronomer demands, forms an elevated branch of the mechanic arts, and requires no little proficiency in the physical sciences. The artists, who have improved the fabrication of the timekeeper, and increased the accuracy of circular graduation, have been proudly ranked as colleagues by the most learned societies; and their names will be intimately associated with the discoveries, for which their handiwork has furnished the indispensable materials.

In considering the character of Rittenhouse, we shall find him uniting in himself more of these varied merits than any person who has lived since a division in the labors of astronomy became necessary. If he made no attempt to extend the domain of celestial mechanics, he nevertheless mastered, under most unfavorable circumstances, all that Newton had taught; he calculated with success the difficult problem of the path of various comets; exhibited unsurpassed precision and accuracy in many important observations; and finally constructed the greater part of his instruments with his own hands. Other claims we might present for him, not only to the admiration, but to the gratitude of his countrymen. We shall not, however, anticipate what may be best gathered from the records of his useful and laborious life.

## CHAPTER II.

*His Birth and Parentage.*

THE family, whence Rittenhouse descended, was originally from that part of the Duchy of Guelders, which had become a province of the United Netherlands. This republic of confederated States had, as is well known, attempted, at one time, to occupy one of the fairest portions of this continent, and had established settlements, scattered at distances, over a wide extent of country. The advantageous position of New York had attracted the attention of its traders and soldiers, and had become the site of a strong fortress, around which a little city had collected, under the name of Amsterdam. Proceeding hence, posts had been established, on the one hand, on the Connecticut River, while, on the other, the western shore of the Delaware was occupied, after a contest with the Swedes. Both banks of the Hudson were in full possession of this colony, not only by military stations, but by flourishing agricultural settlements. The Dutch province of the New Netherlands, therefore, included, at one time, not only the ancient part of the present State of New York, but the whole of

New Jersey, and Delaware, the eastern part of Pennsylvania, and the western part of Connecticut. This wide extent they were not permitted to occupy without remonstrance on the part of the settlers of English blood. Indeed the whole of it fell within the chartered limits of companies founded by the government of England. That government, however, did not interfere directly with the progress of the Dutch, until the reign of the second Charles; nor were its colonies in a condition to assert their claims by an appeal to arms. It was not, therefore, until 1662 that an expedition was fitted out from England, for the conquest of the New Netherlands. This was successful, and the province was ceded by the Dutch, at the peace of the Breda. That peace was but of short duration; and the government of Holland, unwilling to part wholly with so valuable a colony, took advantage of the ensuing war to repossess themselves of it. It did not, however, long remain in their hands; for the final cession of the New Netherlands to England was insisted upon at the peace of Westminster, in 1664, before two years from its recovery had elapsed.

We have been thus particular, because it appears that the ancestor of Rittenhouse emigrated to the New Netherlands during the last-mentioned period, while the colony was reoccupied by the Dutch arms. This ancestor

was the great-grandfather of the subject of this memoir, and he was accompanied, or speedily followed, by his two sons. One of these, by name Nicholas, married in New York. The father, accompanied by this son, emigrated from New York to Germantown in 1690. Here they established the first manufactory of paper ever erected in America. It would appear, that this was an art, in which the elder Rittenhouse, or Rittinghousen, as the name seems to have been originally spelled, had been engaged in his native country ; and it is said that his relatives continued to pursue this business at Arnheim, in Guelderland, after his departure for America. The enterprise, however, marks a union of capital, intelligence, and enterprise, at that time rare in the colonies.

Nicholas pursued the manufacture of paper after the death of his father, and brought up to it his youngest son Matthias, who succeeded to the possession of the mill, and prosecuted the business after the decease of his parent.

Here we find an illustration of the mode of inheritance originally practised among the settlers who derived their origin from Holland, and which is not wholly obliterated at the present day. The father of a family provided, to the best of his ability, for his elder sons, as they successively attained to man's estate. His youngest son re-

mained with him, even if married, until his death, when he succeeded to the occupation of the original homestead. This custom appears better founded in natural reason than the law of primogeniture, and even more just than the existing laws which regulate the descent of property. By it, a prop is secured for the declining years of parents, in the care of an affectionate son, who finds not only his duty, but his own personal interest, in the care which he takes of the property of his father.

It is a remarkable fact, which we must not pass over, that the introduction of the manufacture of paper into America by the Rittenhouses, was about as early as the time at which it took root in Great Britain.

Matthias Rittenhouse, while still resident at Germantown, and occupied in the manufacture of paper, took to wife Elizabeth Williams, the daughter of a native of Wales. This marriage took place in 1727. Shortly afterwards, he appears to have discovered, that agriculture offered greater chances of providing for a growing family, than the manufacture in which he was engaged; for we find him, in 1730, retiring from the latter business. With the funds derived from the sale of his property at Germantown, he proceeded, in that year, to the township of Norriton, where he commenced a settlement upon a small farm,

of which his means were sufficient to enable him to become the owner. His residence, however, does not appear to have been permanently fixed at Norriton, until after 1732; for his three elder children were born at Germantown. Among these was David, the subject of this memoir, who, although not the first born, was the eldest child who survived the age of infancy.

One of the former biographers of Rittenhouse has endeavoured to account for his abilities, by supposing that he derived them by descent from the mother's side. In this he seems to have adopted the popular opinion, which denies to persons of pure Dutch descent any claim to talents of the higher order. This opinion is, however, no more than a prejudice, which any inquiry into the annals of our country might have dissipated. It may indeed be admitted, that the settlers of the New Netherlands made a less careful and less extensive provision for the education of their children, than was done by the descendants of the Pilgrims; and to this want of foresight we may fairly ascribe any difference in the intelligence of the several masses of people. But, in comparing those classes whose wealth gave them the power of commanding the higher kind of education, Holland has no reason to blush for her descendants; and the number of intelligent and learned individuals of Dutch

extraction is only small, because the population whence they are derived is less numerous, than that with which it is thus invidiously compared. The United Netherlands were distinguished, at the time when the ancestors of Rittenhouse emigrated, for high attainments in science and the useful arts. The very business in which they had been engaged in the place of their nativity, and which they so speedily resumed in America, may almost serve as a proof, that they were devoid neither of education nor ability. Still, talent is not hereditary in families; and it often happens that we are wholly at a loss to account, by any circumstances of parentage, for the peculiar genius of individuals. So far from there being a transmission of abilities by natural descent, nothing is rarer than to find successive generations of the same family equally distinguished; and, on the other hand, it often happens that a single individual may shed lustre upon a name, which may be almost disgraced by his nearest relations.

The mother of Rittenhouse is described as a woman of uncommonly vigorous and comprehensive mind, but as almost wholly deficient in education. If, therefore, we are to seek in his genealogy for the cause of his distinction, it is rather to be found in the fact of his deriving his descent from two races of distant origin. The

effect of such a mixture of races is well illustrated in the character of the people of Great Britain ; and the same cause seems to be at work in producing that peculiar activity of mind which marks our own countrymen, into whose veins blood derived from almost every nation of any intellectual eminence in the old world has been successively transfused. From such parents, and of such lineage, DAVID RITTENHOUSE derived his birth, which took place at Germantown, Pennsylvania, on the 8th of April, 1732.

## CHAPTER III.

*His Education.—Early Indications of Mechanical Genius.—Remarkable Progress in Mathematical Learning.*

No records or traditions remain of the manner in which Rittenhouse obtained the elements of learning. His education, however, could not have been neglected; and what public instruction, in the imperfect form it must have borne in a remote district of a newly settled country, denied, seems to have been supplied by the tuition of a maternal uncle. This near relation, although exercising the humble trade of a joiner, appears to have been gifted with a taste and capacity for scientific pursuits. Circumstances made him an inmate in the family of the elder Rittenhouse, and in this abode he died. His books and papers passed thereupon into the custody of his nephew David, along with his tools of trade. Among his books were found elementary treatises on mathematics and astronomy; and in addition he left numerous manuscripts, in which were contained models of calculation and investigation.

The death of his uncle took place when Rittenhouse had attained his twelfth year. Whether

in continuation of former studies, or in consequence of the interest excited by the treasures which came by this event into his possession, he seems from that time to have devoted his whole mind, and every opportunity of leisure, to the pursuit of the studies in which he afterwards became distinguished. The son of a farmer, in comfortable, but by no means affluent circumstances, it became imperative, that he should share in the labors of agriculture; and this was the more necessary, as his father entertained a desire that he should pursue the occupation of a farmer. Even when engaged in agricultural labors, however, the bent of his genius was not to be restrained; and it was recollectcd by his brother, that in his fourteenth year he was in the habit of covering the fences of the farm, and the implements of husbandry, with numerical figures and diagrams, unintelligible to his rustic associates.

Mere abstract investigations did not, however, engross his whole attention. The tool-chest of his uncle supplied him with the instruments for practice in the mechanic arts; and he appears to have applied his severer studies to practical purposes, at every possible opportunity. Thus it is recorded of him, that, as early as in his eighth year, he had made a model of a water-mill, and, at no long period after the death of his uncle, he

undertook and succeeded in the construction of a clock. The material of both of these early evidences of his ingenuity and knowledge was wood. But he almost immediately after the last-mentioned instance of successful ingenuity, undertook the bolder task of framing a timekeeper in metal ; and this he also successfully accomplished.

Among the books he inherited from his uncle was an English translation of the "Principia" of Newton. Such was the progress which he made in mathematical knowledge, although now destitute of any aid, that he was enabled to accomplish the perusal of this work, for the proper understanding of which so much acquaintance with geometry and algebra is necessary, before he had attained his nineteenth year. Newton, as is well known, from deference to the practice of the ancient philosophers, adopts in this work the synthetic method of demonstration, and gives no clue to the analytic process by which the truth of his propositions was first discovered by him. Unlike the English followers of this distinguished philosopher, who contented themselves, for a time, with following implicitly in the path of geometric demonstration, which he had thus pointed out, Rittenhouse applied himself to search for an instrument, which might be applied to the purpose of similar discoveries, and in his researches attained the principles of the

method of fluxions. So ignorant was he of the progress which this calculus had made, and of the discussions in relation to its invention and improvement, that he for a time considered it as a new discovery of his own. In this impression, however, he could not have long continued ; as he made, in his nineteenth year, an acquaintance, who was well qualified to set him right in this important point.

In the year 1751, the Reverend Thomas Barton became an inhabitant of Norriton. This gentleman had just completed his education at Trinity College, Dublin, and been admitted as a clergyman of the Episcopal Church. Passing to America in pursuit of preferment, which want of powerful connexions denied him in Europe, he became for a time the teacher of a school at Norriton. Although Mr. Barton was principally distinguished as a classical scholar, he was also well grounded in all the elementary mathematics then considered necessary in the undergraduate course of the institution, where he received his education. Exiled as he must have felt himself from literary society, the discovery of a neighbor of such intelligence as Rittenhouse was a matter of no little pleasure ; nor could the latter have felt less joy in finding at last an associate with whom he could communicate on his favorite studies. The difference in their ages was but two years ; and,

when we take into view the more rapid development, both of body and mind, which is usual in our climate, this difference was probably insensible. A strong intimacy speedily took place, which ripened into friendship ; and this friendship was farther cemented by an attachment, which Barton formed for the sister of Rittenhouse, who subsequently became his wife. This intimacy with Barton was attended with valuable consequences. Desirous to peruse his admired Newton in the original dress, Rittenhouse now applied himself to the study of the Latin language, which he speedily mastered. He also appears, under the instruction of Barton, to have acquired the elements of Greek, although he never attempted to become a proficient in the literature of that tongue. Barton also had it in his power to communicate to Rittenhouse scientific works of more modern date, than those to which his previous studies had, from circumstances, been confined, and treating of a greater variety of subjects. Setting forth from his native country with the intention of devoting himself to the profession of a teacher, the former had provided himself with a well-selected library, not only in classical literature, but also in the pure and mixed sciences. These were freely imparted to his youthful and ardent associate.

Before two years had elapsed, the success of

Barton as a teacher, attracted the attention of the government of the College of Philadelphia. He was in consequence called to fill a professor's chair in that institution. The collections of the College were therefore placed at his disposal, and he did not hesitate to use his privilege for the advantage of him, who had now become his brother-in-law. Barton had also projected a circulating library before he quitted Norriton. This project was accomplished, and Rittenhouse took an active part in its management. By this a fund was obtained for the purchase of useful works, which neither could have afforded to procure from his own resources.

Barton had not long filled his chair in the University, when it became necessary for him to visit Europe. He on this occasion was commissioned by Rittenhouse to purchase an additional supply of books. This commission he faithfully fulfilled.

Such was the aid which Rittenhouse derived from his brother-in-law; but this, however valuable in communicating a knowledge of the existing state of science, and in opening a channel through another language, by which to reach the thoughts and learning of the master spirits, both of antiquity and modern times, (for Latin had not ceased to be the conventional language of science,) had no effect in determining the inclinations of

Rittenhouse for mathematical and physical studies. The acquaintance with Barton was therefore both useful and profitable, but exercised a far less important influence on the future life of Rittenhouse, than has been frequently ascribed to it.

The more, indeed, we contemplate the early life of Rittenhouse, the more our admiration is excited. With such elementary knowledge only as could be obtained at the school of a remote settlement; under the parental discipline of a father, who rather discouraged than aided his studies, and of an illiterate, although strong-minded mother; possessed of no books but those of an humble mechanic; he persevered, until he had, step by step, mastered all the truths of mathematical science, and had arrived at the principles of that calculus, for the honor of whose invention a Newton and a Leibnitz had contended. At the same time, with no tools but those of a country joiner, and aided by no instruction except from books, he had attained such skill in practical mechanics as to execute the delicate mechanism of a timekeeper.

## CHAPTER IV.

*His Agricultural Occupations.—Choice of a Profession.—Entrance into Business.—Laborious Pursuit of his Trade and Scientific Studies.—Consequent Injury to his Health.—Becomes known as an Artist and an Astronomer.—His Marriage.*

THE father of Rittenhouse had always intended that his eldest surviving son should pursue the same plan of life which, on his retreat from his manufactory, he had chosen for himself. He had, on leaving Germantown, become, as we have already stated, a farmer, and for this occupation he destined our philosopher. The term farmer, it may be mentioned incidentally, bears a far different signification among us, from that which its derivation would seem to warrant, or in which it is understood in Great Britain. By this word we understand, not the tenant, either at pleasure, or on some more secure tenure, of a more wealthy landlord, but most frequently the independent cultivator of his own fields. The condition of a tenant is in truth extremely rare in all parts of the United States.

In the avocations necessary in this mode of

life, Rittenhouse had been laboriously employed, from the moment his strength was sufficient to perform them ; and the studies and mechanical operations of which we have spoken, were no more than the pastimes of those intervals of leisure, which so frequently occur in agricultural life in the United States. When the mind of Rittenhouse became so far matured, as to fit him for reflecting upon the plan of his future life, his reason led him to disapprove of that pointed out by his father. He had discovered in himself powers of higher character, than are necessary for the occupation of a farmer ; and, encouraged by his success in the construction of a complete timekeeper, he resolved, could his father be prevailed upon to give his consent, to choose for his profession that of a clock-maker. This branch of the mechanic arts was, at that time, little practised in the colonies, and it does not appear that there were any means within his reach for obtaining instruction in it. His reasons finally satisfied his father of the propriety of this contemplated course.

The choice of Rittenhouse was directed by no little wisdom and modesty. Had his mind been tinctured with vanity, it is probable that he would rather have sought to make those studies available, in which he had, by this time, made no mean proficiency, than have undertaken an apprentice-

ship, for we might so style the practice of an art, in which his highest efforts, when compared even with the less perfect instruments of that period, were no more than the playthings of an ingenious, and perhaps precocious boy. Years of toil and patient labor must have appeared in perspective, before he could obtain a competent degree of skill; and without it the reputation, by which alone fortune, or even competence, could be secured, was inaccessible. Such thoughts, however, did not deter Rittenhouse; and, the consent of his father being finally obtained, along with funds to purchase a part of the necessary tools and instruments, he opened a shop in the year 1751. This was a small building erected for him on his father's farm; and he speedily stocked it with instruments, the work of his own hands, more perfect than any which could at that time be bought in Philadelphia.

The art of clock-making was at that time far from having reached the degree of perfection it has attained of late years, partly from the great extent to which the division of labor has since been carried in it, and partly from the valuable improvements which it has derived from the discoveries of physical science. To improve the art by introducing a division in the labor, neither entered into the views, nor was within the means of Rittenhouse. Such division can only be

carried into effect by the resources of wealth and capital, of which he had little. But the search for improvement, by the application of physical science, had already been entered into; and Rittenhouse might fairly hope, that the knowledge he had previously acquired might be advantageously applied to the profession he had chosen. The compensation pendulum of Graham, which has of late asserted its equality, if not its superiority, over all others intended to subserve the same purpose, had indeed been invented more than twenty years before. But his contemporaries did not appreciate the merits of the discovery, and it was forgotten or neglected. Harrison and Leroy had not made public their inventions, and the field of investigation appeared to be open. The art of clock-making, therefore, not only presented a trade, interesting in itself, and capable of affording a decent livelihood, but also demanded, in order that it should be pursued with success, that he should continue the study of those physical and experimental sciences, by the progress of which the instrument could alone be perfected. His astronomical studies had taught him the value of the clock in the practical part of that science, a value so great as to render it the indispensable companion of an observer; and he was aware that he could not deliver his pieces of nicest workmanship to the purchaser, until

their rates had been ascertained by reference to the motions of the heavenly bodies. He therefore saw in his intended trade, not only an opportunity, but a necessity, for continuing the study of the sciences in which he delighted.

For the space of seven years Rittenhouse devoted himself most assiduously to his trade, and the studies he saw to be connected with it. The whole of the day was steadily employed in the former ; time for the latter was stolen from his hours of repose. Up to this time his constitution, fortified by agricultural labor, and exercise in the open air, had been robust and vigorous. But such intense and unremitting exertion was not without evil effect upon his health ; and this was probably aggravated by the contrast, which a wholly sedentary life presented to his former active pursuits. He finally was affected by a complaint, the prominent symptom of which was a continual and disagreeable sensation of heat in his stomach. He was, in consequence, compelled to abandon for a time the pursuits in which he had so earnestly engaged. A short period of relaxation sufficed to restore him, if not to his pristine health, at least to such a degree of it, as enabled him to resume his business. But the complaint was not wholly overcome ; it continued to afflict him from time to time throughout

the rest of his life, and was finally the cause of his abandoning the exercise of his art.

Pursuing his trade with such unwearied assiduity, it is not surprising that he speedily acquired reputation for the accuracy and perfection of his workmanship. This reputation was spread abroad by the numerous highly-finished pieces of mechanism which issued from his workshop, bearing the maker's name inscribed upon their dials. His neighbors too were not slow to note the attention he paid to observations of the heavenly bodies, which he extended far beyond those absolutely essential for the rating of his time-keepers, and spread his fame throughout their limited circle as an astronomer. It was now that the good offices of his friend Barton were again exerted. Knowing well the ability of his brother-in-law, he watched with earnestness his almost daily progress in manual dexterity and scientific knowledge. In the more extended circle in which he moved, he found those who could fully appreciate all the skill and knowledge of Rittenhouse. With these he brought him in contact, to the mutual pleasure of both parties. From such associations Rittenhouse derived no little benefit, in obtaining a channel through which his merits could be made more extensively known. Among those who may be mentioned as the early friends of Rittenhouse, were Dr. Smith, the

provost of the College of Philadelphia, and John Lukens, surveyor-general of the province. Their official positions rendered them the organs of the government, when a demand for astronomic knowledge arose for public purposes; and they conferred no trifling public benefit, when they pointed out the capacity of Rittenhouse.

While thus engaged in the pursuit of his occupation, Rittenhouse long remained an inmate of his father's family. Here his labors were gradually acquiring for him provision competent to his moderate desires.

After the lapse of thirteen years from the time of his entering into business, his father made him proprietor of the paternal mansion, retiring himself to Worcester, where he had purchased another farm. Thus having attained to independence, he sought a wife, and, in the year 1764, married Eleanor Colston, the daughter of a respectable farmer of the neighborhood. This marriage appears to have been a happy one; and the loss of his consort, after several years, produced so great a depression in the spirits of the surviving husband, as to call forth the remonstrances of his friends.

## CHAPTER V.

*Boundary Line of Pennsylvania, Delaware, and Maryland.—Mason and Dixon's Line.—Boundary of Pennsylvania and New York.*

RITTENHOUSE had hardly begun to attract the attention of the intelligent society of Philadelphia, when an occasion presented itself for applying his peculiar talent and knowledge to use in the public service. The several States, of which the American Union was first composed, held their respective territories by grants from the British crown. In the absence of a topographical knowledge of the countries granted, it had been customary to define the limits of the several charters by lines traced upon a map, and defined either by geographical terms, or even by more arbitrary methods. In the subdivision, which in some cases took place, of the original grants, similar lines were chosen to define the manner of partition. These lines were in most cases parallels of latitude, or portions of a meridian, traced in some given degree of longitude. However easy it may be to delineate such lines upon a map, to trace them upon the ground is a business of no little labor, and requires no small degree both of astronomic and geometric skill.

The tenure, by which Penn and his descendants held their possessions, was defined by lines of this character. He had in the first instance purchased a territory included within a circle, drawn around a point in the town of Newcastle, as a centre, with a radius of twelve miles. This had been subsequently extended to the south by drawing a meridian line tangent to this circle. By a farther grant he had acquired all the territory extending westward from the Delaware between certain parallels of latitude, for the distance of five degrees of longitude. All these contemplated boundaries were as yet merely matters of parchment record, or geographical description; but the place where the lines existed was in some cases wholly unknown, in others, but imperfectly guessed at. The part of this boundary, which most early attracted the attention of the interested parties, was that, which separated the territory held by Penn as proprietor, from that belonging to Lord Baltimore, and particularly the limits of the present States of Delaware and Maryland. As early as 1735, this boundary had become the subject of a suit in the British court of chancery, and after fifteen years of delay a decree had been awarded. By this decree the parties were directed to enter into a formal written agreement to have the lines traced upon the ground. This agreement, how-

ever, was not executed until 1760, and no joint action was had under it until 1769. But in the last-mentioned year Messrs. Mason and Dixon were sent out from England, as commissioners, for the purpose of carrying the agreement into effect.

In the proceedings before the court of chancery, the Penn family had been the complainants. Their interests were far more deeply involved in the decision, than those of the opposite party; for the wise institutions of their ancestor, and the repugnance of the settlers under them to slave labor, had rendered each acre within their proprietary jurisdiction of much greater value than in the lands held by Lord Baltimore. They were therefore unwilling to await the slow course of chancery proceedings, but determined to examine the question for themselves; knowing, that, when a boundary was defined in scientific terms, it was only necessary to cause it to be traced by men of competent attainments, and no important difference could arise in the subsequent determination by a joint action.

The governor of the province of Pennsylvania was therefore directed to seek out a competent person, to whom this important task might be intrusted. The most difficult part of the boundary was no doubt that defined by a circle, having a radius of twelve miles around the town

of Newcastle, as a centre, and the problem was entirely new in practical geometry. To this the attention of Rittenhouse was first directed by the Proprietary government, not only as the part of the division line which was involved in the greatest uncertainty, but because it passed through lands at that time more accessible and therefore more valuable than any others in dispute. The appointment to this important task bore date in 1763, and he was engaged in it for some months in the following year. It was performed so much to the satisfaction of his employers, that he was proffered, and received, more than the stipulated compensation. It does not appear, that on the subsequent arrival of the commissioners appointed by the British court of chancery, it became necessary to change the locality of any part of this line, although they were furnished with the best instruments which Europe could then produce, and one of them was already highly celebrated as an accomplished observer, while the American topographer had no instruments that were not the work of his own hands, and was as yet unknown to fame.

The British astronomers, Messrs. Mason and Dixon, seem therefore to have contented themselves with running the meridian tangent southward, and the parallel of latitude westward, until it intersected the meridian traced north-

ward from the source of the north branch of the Potomac. They thus defined the boundaries of the present States of Maryland and Delaware on the one hand, and of Pennsylvania and Delaware on the other. This operation has become famous on more than one account. The tracing of the meridian line between two given latitudes, both of which required accurate astronomic determination, over a country nearly level, afforded an opportunity for actually measuring the itinerary length of the arc in question. This measure is still quoted as one of those whence the magnitude and true figure of the earth are to be deduced, and is the only case where the length of a degree of a meridian has been actually measured ; for, in all other instances, the determination has been made, by measuring a base of a few miles, and calculating the whole length by means of a series of triangles. The parallel is well known in American politics, as it forms the separation between the States to which the names of Middle and Southern are applied, and is the boundary between the region in which domestic slavery is still recognised by law, and that in which it has been abolished.

The previous observations of Rittenhouse seem to have greatly facilitated these operations of Mason and Dixon ; but, as the official report is made by them, and could have authority only

when so made, the connexion of our own countryman with this important question is but little known, and rarely mentioned even among ourselves.

That geographical and geometric lines should have formed the divisions of the original provinces, and thus of the States, has exercised an influence upon the destinies of our country, which is not the less evident, because it has rarely been noticed. In most of the disputes concerning land titles derived from different authorities, or concerning territorial jurisdiction, it has not been necessary to have recourse to civil violence or hostile arms. The *ultima ratio* has been not the cannon or the bayonet, but the plumb-line, the clock, and the telescope. Even courts of civil authority, where such have had jurisdiction, have been appealed to, only to cause one or other party to perform his duty, or to commission the astronomic surveyors by whom the determination was made. The habit has thus been created of referring to reason and science for the composition of all disputes; and this is so firmly established among the people, that even the folly of their rulers, as was manifested in a recent instance, cannot bring them to refer the matter to the decision of arms. That this habit has become a part of the character of our people, is in a great measure due to the confidence created

by the fidelity and accuracy with which the earliest operations of the sort were performed. From the delineation of Mason and Dixon's line to the present time, both State governments, although this portion of their sovereignty has been reserved, and individuals, who have occasionally suffered hardship, have bowed in obedience to the decision of the astronomer. Rittenhouse was the first American, who was employed in the delineation of such lines; he was also most extensively engaged in tracing them, and, with those formed under his instruction, actually defined nearly all the important division lines within the chartered limits of the thirteen original States. Most of these delicate and valuable operations were however performed at a later period of his life, and after the close of the revolutionary war. The account of them will therefore fall into a subsequent chapter of this memoir. One alone is connected by date with that of which we have just spoken.

This was the determination of the division line between New York and New Jersey, and thus of the point whence the parallel, which divides the former State from Pennsylvania, was to be traced westward. The northern limit of New Jersey upon Hudson's River is the forty-first degree of latitude. The point where this parallel intersects the shore was fixed by Rittenhouse in

the year 1769, at the request of a board of commissioners, deriving their authority from the legislatures of the provinces of New York and New Jersey. The northern limit of both Pennsylvania and New Jersey, upon the Delaware, is the forty-second degree of latitude ; and this parallel, continued westward, divides the former from New York. To determine the place where this parallel intersects the Delaware, Rittenhouse received the appointment of commissioner from his native province, and was met by a gentleman named on the part of the province of New York. This appointment also included the duty of running the parallel westward, but nothing farther was done at the time (1774), than to determine the point of departure upon the Delaware.

## CHAPTER VI.

*Experiments on Expansion.—Application of them to the Pendulum.—Metallic Thermometer.—Experiments on the Compressibility of Water.—Adaptation of Planetary Machines to Clocks.—Project of an Orrery.*

FOR the sake of connecting with each other the geodetic operations of Rittenhouse performed previous to the revolutionary war, we have departed from the order of time. We shall now return, for the purpose of mentioning various other scientific occupations in which he was engaged, between the date at which he was first employed upon the boundary of Maryland, and that at which he became a commissioner to define the line between the States of New York and Pennsylvania.

To a person engaged in the manufacture of clocks, and occupied in determining their rates by astronomic observations, the influence of variations of temperature upon the oscillations of pendulums becomes at once apparent. That this is owing to the expansion and contraction of the materials of which the pendulums are composed, under alternations of heat and cold, was well

understood. Partial remedies, too, had been applied; but they had not yet been rendered as available as they might be, for want of a sufficient number of well-conducted experiments. If such had been made, they had not been recorded or published. At the present time, we can refer to no observations of earlier date than those of Rittenhouse, which are worthy of confidence, except a few of Muschenbroeck and of Smeaton. The latter were only made public in 1754, when we have reason to believe that Rittenhouse had already made some progress in his researches. That he entered into this investigation experimentally and pursued it with no small success, we have abundant evidence. The first volume of the "Transactions of the American Philosophical Society," published in 1770, contains a paper of his on expansion by heat; another paper on the same subject is noted by Rush as existing in their archives, and is probably that on the improvement of timekeepers, in the fourth volume. The accuracy of his experiments is demonstrated by the various astronomic clocks, which were constructed by his own hands, or under his direction, in which original forms of compensation pendulums were employed. In this respect, Rittenhouse was somewhat in advance of the applications of science in Europe. The mercurial pendulum, which is now admitted to be the best

compensation for a fixed observatory, had indeed been invented by Graham in 1726; but this important discovery had been neglected and almost forgotten. The account of the gridiron pendulum, which was the first that came into familiar use in Europe, was not published by Harrison until 1775. Rittenhouse himself, however, in a letter dated in 1768, refers to Harrison's time-keepers as having been executed in 1765. If, then, he was aware of the discoveries of Graham and Harrison at the time he commenced his own researches, he did not content himself with a servile imitation, but entered into experiments on which to found his own practice, and struck out a method of compensation different from either.

Another valuable application of a correct knowledge of the relative expansions of solid bodies also occurred to Rittenhouse, and he carried this application into successful practice. In this he forestalled, in the career of discovery, Breguet, who, within the present century, has received no small praise for the re-invention of a forgotten instrument of Rittenhouse's. We refer to the metallic thermometer. It is in evidence, that, in the year 1769, the latter constructed an instrument, in which, by the expansion of metals, a hand was made to traverse on a semicircular dial-plate, on which were marked the degrees of Fahrenheit's thermometer, and that it corre-

sponded in its indications with the mercurial instrument. Here then we have his experimental knowledge brought to a severe practical test, and applied to an important purpose.

The Florentine Academy had, by an experiment, all the circumstances of which could not be reached, inferred the incompressibility of water. The accuracy of this inference remained for a long time unquestioned. It may be doubted, whether the whole scientific world rejected the Florentine experiment until very recently, when the experiments of Oersted and Perkins have demonstrated the compressibility of water beyond all cavil. The question was at least still open in the days of Rittenhouse, and he proceeded, in 1767, to examine it for his own satisfaction. In doubting the results of the Florentine philosophers, he was not however original ; the subject had already been examined by Canton in England, and by Kinnersley, at that time a professor in the College of Philadelphia. But, as the question was not yet admitted to be settled, merit is still to be attributed to one who brought the aid of his powers of research to the investigation of an important question in physical science ; an investigation which he pursued by means of his own contrivance, and illustrated by experiments of great ingenuity.

The merits of Rittenhouse, not as a mechanic

only, but as a successful improver of physical science, now became apparent to his countrymen. His rising reputation is manifested by the compliment paid him in 1767 by the College of Philadelphia, by which the honorary degree of Master of Arts was conferred upon him at the public commencement. At a time when the distinction in points of useful knowledge, between those who had received the advantage of a public education and those who had not, was still marked, this act implied a higher degree of acknowledged merit, than would be inferred from a similar diploma at the present day. It was therefore not only a deserved compliment, but a passport to the realms of science.

In the pursuit of his mechanical vocation, Rittenhouse had complied, as was necessary, with the prevailing taste. His clocks were not only accurate as timekeepers, and furnished with the apparatus for striking the hours, but they frequently contained chimes, and other arrangements for performing pieces of music. Among other embellishments, he had adapted to one of his timekeepers a small planetary machine, in which the mean motions of the bodies of the solar system were made to keep their proper rate with the time marked by the instrument. The calculations, into which it became necessary for him to enter as a preparation for this toy,

appeared as capable of application on a larger scale. He, in consequence, in 1767, projected the instrument, which, perhaps improperly, is known under the name of his Orrery.

Machines, by which the apparent motions of the heavenly bodies could be represented, are of remote origin. Among the ancients they had even been brought to such a degree of perfection, as to be capable of use in the prediction of eclipses, and of other phenomena, with an accuracy as great as that of any other known method. The great improvements made in modern astronomy had rendered them useless for any such purpose; and, confined to the representation of appearances alone, the mechanic spheres of the ancients were rejected as giving false notions of the structure of the universe. Still, planetary machines were not the less in request, and it was attempted to give, by means of them, an exhibition of the true relative motions and distances of the bodies of the solar system. The most celebrated machine of this character was constructed by Rowley for the head of the family of Boyle, a name of no little lustre in the annals of science. This nobleman bearing the title of Earl of Orrery, the instrument was introduced to the public under this name, which still continues to be applied to all those intended for similar purposes. By this name also did Rittenhouse propose to designate his projected

piece of mechanism. In his views, however, he was actuated by a much higher ambition than has ever stimulated any other person, who has attempted to exhibit the mechanism of the universe by the aid of the workmanship of human hands.

Abandoning all attempts to exhibit the imaginary celestial sphere, a mode of representing appearances, which is no more than a projection in orthographic perspective upon a surface supposed to be infinitely distant, he retained no other portion of it but the zodiac. He wisely saw the immense difference, which must result between the true geocentric places of the bodies themselves, and those which would be represented by any instrument enclosed within a skeleton sphere. His mimic planets were not made to revolve in circular orbits with uniform motion, but were caused to describe ellipses in conformity to the laws by which Kepler had completed the theory of Copernicus. So far from being content with a mere approximation to the relative motions, he conceived the design of regulating them to each other with such accuracy, that his instrument might be used in the place of tables for predicting the places and phenomena for any given epoch. Bold and novel as were these designs, Rittenhouse proposed to carry them into effect, if not in such a manner as to supersede the use of astronomic tables, yet so as to give to calculators

a valuable check upon their numerical computations. The motions of his mimic planets were to be so registered upon proper dials, as to give not the mean heliocentric places, but the true anomalies, defining the positions in elliptic orbits, both as seen from the sun and from the earth for twenty-five centuries before, and as many after, the date of its construction. If, then, we should ascribe, as some have done, to the orrery of Rittenhouse no higher place among physical instruments than that of an ingenious philosophic toy, we must admit that he exhausted in its construction all the existing knowledge of astronomy, and applied this extensive scientific information, with the most consummate practical skill.

From the time at which the orrery was projected, until it was actually completed, Rittenhouse was exposed to many interruptions. These, however, are so little to be regretted, that we consider them as having furnished him with the means of establishing his future fame upon a basis far more sure than any such application, even of the highest science, and the most perfect mechanical dexterity.

## CHAPTER VII.

*Preparations for Observing the Transit of Venus.*

UP to the year 1768, we have no records of the astronomic observations of Rittenhouse. They had been limited to such as were necessary for regulating his timekeepers, or were called for in tracing the boundary lines, for the determination of which his practical and theoretic skill had been resorted to. In the practice of such observations, and in the execution of the public trusts confided to him, he had gradually acquired much dexterity in the management of instruments, and facility in calculation. The year 1769 presented an opportunity, in which his practised powers of observation and computation might be applied to an important purpose. This year is rendered memorable in the annals of astronomy, by the recurrence of that rare phenomenon, the transit of the planet Venus over the Sun's disk.

From the time that the truth of the Copernican system had been universally admitted, it was known that this planet must, at every succeeding interval of about five hundred and eighty-four days, be in inferior conjunction with the sun.

Whether the planet shall be exactly interposed at this time between the body of the sun and the earth, in such manner that it may be seen, by the aid of proper instruments, passing over the disk of the former, will depend upon the inclination of the orbit of the planet. As this inclination is considerable, the phenomenon of such a passage was inferred to be at best a rare one. Before the telescope was adapted as a sight to graduated instruments, and great public observatories were established at national expense, the tables which gave the inclination of Venus' orbit were far from agreeing. An Englishman of the name of Horrox, however, placing reliance upon the Rudolphine tables of Kepler, ventured to predict a transit of this planet for the year 1639. The result verified his prediction, and he, with a friend of the name of Crabtree, was fortunate enough to see this rare and curious phenomenon, of which they alone were witnesses. The improvement in the tables of the elements of the orbits of planets, made in consequence of the establishment of the observatories of Paris and Greenwich, enabled astronomers to predict with certainty transits for the years 1761 and 1769. No other can again take place until the year 1874. The phenomenon, from its extreme rarity, is therefore one of the greatest interest in astronomy. Far greater importance had, however, been given to the

phenomenon of the transit by the remark of Halley, that observations of it, made either at a single favorable position, or in remote parts of the earth's surface, afforded the best possible data for calculating the dimensions of the solar system ; for, by means of them, the horizontal parallax, both of Venus and the sun, may be determined, and thence their distances, in terms of a semi-diameter of the earth, become capable of calculation in the most easy way.

The transit of 1761 was visible in Europe, and in other parts of the eastern continent. Its approach was looked for with great anxiety, and imposing preparations were made for observing it. Not only were such measures taken at the great observatories of Europe, but observers, furnished with the best instruments which the existing state of the arts would supply, were despatched to St. Helena, to the Cape of Good Hope, to Tobolsk, to Calcutta, to Madras, and to Tranquebar. The governments of France, England, Russia, and Denmark seemed to vie with each other in zeal ; and no expense was spared to make the observation complete, by which the truth of the Copernican system might be brought to ocular demonstration, the laws of Kepler reduced to experimental proof, and the vast distances and dimensions of the solar system included in a problem, as simple in form as the easiest case of trigonometry. No part of the

transit of 1761 was to be visible in the continent of America ; but, in the island of Newfoundland, the sun would be seen to rise before the emergence of the planet from his disk. As this was the only spot in the western hemisphere, where an observation could be made, Professor Winthrop, of Harvard University, was sent to St. John's, in that island, furnished with the proper instruments by the liberal grant of the colonial Assembly of Massachusetts. In fine, wherever the transit was to be visible, and this was in every part of the civilized world except America, every amateur astronomer, as well as those who made that science their profession, endeavored, to the utmost of his means, to take advantage of the rare occasion.

Notwithstanding such imposing and costly preparations, the transit of 1761 ended in disappointing every hope. Some of the most practised observers, particularly those stationed at the great fixed observatories, lost the view altogether, in consequence of the weather ; a very considerable discrepancy existed among the observations of others ; and, upon the whole, the determination of the parallaxes was admitted to be inconclusive. It was indeed remarked, that, by throwing out four of the observations altogether, the rest might be made to agree, or that the same might be done, by supposing, what occasionally happens, that each of these four observers had noted the wrong minute, in

writing this element of time in front of the second marked by his clock. That this was the case, has now been established, beyond the possibility of doubt ; but, to correct, in this apparently arbitrary manner, a large proportion of all the observations, which the state of the heavens permitted to be made, would hardly have been justified by any of the laws of probability.

Such an unfortunate result of the transit of 1761 served to make that of 1769 of far greater interest than had attached even to the former. The hopes of astronomers having been once frustrated, anxiety became mingled with expectation ; and this anxiety was enhanced by the consideration, that but a small part of the transit of 1769 was to be visible to any of the great observatories of Europe. At Stockholm, London, Paris, Lisbon, and Madrid, the immersion might be seen just before sunset, and the emersion at Petersburg soon after sunrise on the following morning, but at no other European capital. In the northern frozen zone, beyond the latitude of sixty-seven and a half degrees, the sun was not to set on the day of the transit ; the whole of the phenomenon would therefore be visible ; and at Wardhuys, in Lapland, where the observation would be included between the hours of half past nine in the afternoon and three in the morning, the circumstances would be the most favorable possible.

In less high northern latitudes, near the same meridian, the beginning might occur before sunset, and the end take place after sunrise. Such a position was found at Cajaneburg in Sweden.

Maskelyne, the British Astronomer Royal, seeing that advantages, such as were presented by the last-mentioned places could be secured by the comparison of observations made at two different points, one in the southern, the other in the northern hemisphere, induced his government to despatch two expeditions, the one to Hudson's Bay, the other to Otaheite. The latter was under the command of the celebrated Cook.

The French government, at the instance of Lalande, sent Chappe to California; here the immersion was to take place when the sun was on the meridian, and, at that season, not far from the zenith.

Even at Pekin, although only the last contact was to be visible, the European astronomers of the imperial observatory were aided and excited to the task. It may be here mentioned, that a great degree of jealousy, and consequent mystery, attended the preparations of the several governments. This appears to have arisen from the arrogance of Lalande, who wished to assume the direction of the whole, and expressed his expectations that the records of the observations should be sent to him for calculation. The choice of

the stations of Otaheite and Wardhuys was therefore carefully concealed from him, until it was too late for him to abandon the less favorable position of California, for another.

The position of Pennsylvania offered advantages of another description ; the whole of the transit was to be visible, beginning before, and terminating after noon. It was thus to occur at hours when less disturbance was to be feared from fogs and vapors, than in the north of Europe ; while the effects of the parallax, it was hoped, if less than at Cajaneburg, Otaheite, or Wardhuys, might be sufficiently marked to admit of favorable results in the subsequent calculations. At all events, it would be a subject of mortification, that so important a phenomenon, visible throughout its whole duration to the three British colonies in America, should be permitted to pass unnoticed, except by idle curiosity ; while a successful observation, and the calculation of the important results, would redound to the scientific reputation of the whole of the provinces.

Such reflections did not escape Rittenhouse, and while he felt his own capacity to perform the necessary operations unaided, and had prepared with his own hands most of the more essential instruments, he showed himself unwilling to attempt to engross the whole honor, and manifested a laudable anxiety to have the means of

observation so far multiplied and distributed, that the risk of failure from unfavorable weather, or any other contingency, might be as much diminished as was possible. He therefore communicated to the Philosophical Society of Philadelphia a calculation of the anticipated times and phenomena of the transit, as likely to be visible at Norriton, and called the attention of that learned body to the important subject. It cannot be doubted that the members of that Society, who afterwards distinguished themselves by performing a part in the observation and subsequent calculations, were aware of the importance of the occasion ; but the matter appears to have been first brought before them in a tangible shape by the communication of Rittenhouse ; and this communication, showing them that they had in the vicinity, both many of the instruments, and an expert observer and calculator, seems to have served as a stimulus to their zeal, by exhibiting the possibility of attaining high honor, where the gratification of a laudable and enlightened curiosity had alone been thought of.

New Jersey, and Delaware, the eastern part of Pennsylvania, and the western part of Connecticut. This wide extent they were not permitted to occupy without remonstrance on the part of the settlers of English blood. Indeed the whole of it fell within the chartered limits of companies founded by the government of England. That government, however, did not interfere directly with the progress of the Dutch, until the reign of the second Charles; nor were its colonies in a condition to assert their claims by an appeal to arms. It was not, therefore, until 1662 that an expedition was fitted out from England, for the conquest of the New Netherlands. This was successful, and the province was ceded by the Dutch, at the peace of the Breda. That peace was but of short duration; and the government of Holland, unwilling to part wholly with so valuable a colony, took advantage of the ensuing war to repossess themselves of it. It did not, however, long remain in their hands; for the final cession of the New Netherlands to England was insisted upon at the peace of Westminster, in 1664, before two years from its recovery had elapsed.

We have been thus particular, because it appears that the ancestor of Rittenhouse emigrated to the New Netherlands during the last-mentioned period, while the colony was reoccupied by the Dutch arms. This ancestor

was the great-grandfather of the subject of this memoir, and he was accompanied, or speedily followed, by his two sons. One of these, by name Nicholas, married in New York. The father, accompanied by this son, emigrated from New York to Germantown in 1690. Here they established the first manufactory of paper ever erected in America. It would appear, that this was an art, in which the elder Rittenhouse, or Rittinghousen, as the name seems to have been originally spelled, had been engaged in his native country ; and it is said that his relatives continued to pursue this business at Arnheim, in Guelderland, after his departure for America. The enterprise, however, marks a union of capital, intelligence, and enterprise, at that time rare in the colonies.

Nicholas pursued the manufacture of paper after the death of his father, and brought up to it his youngest son Matthias, who succeeded to the possession of the mill, and prosecuted the business after the decease of his parent.

Here we find an illustration of the mode of inheritance originally practised among the settlers who derived their origin from Holland, and which is not wholly obliterated at the present day. The father of a family provided, to the best of his ability, for his elder sons, as they successively attained to man's estate. His youngest son re-

mained with him, even if married, until his death, when he succeeded to the occupation of the original homestead. This custom appears better founded in natural reason than the law of primogeniture, and even more just than the existing laws which regulate the descent of property. By it, a prop is secured for the declining years of parents, in the care of an affectionate son, who finds not only his duty, but his own personal interest, in the care which he takes of the property of his father.

It is a remarkable fact, which we must not pass over, that the introduction of the manufacture of paper into America by the Rittenhouses, was about as early as the time at which it took root in Great Britain.

Mathias Rittenhouse, while still resident at Germantown, and occupied in the manufacture of paper, took to wife Elizabeth Williams, the daughter of a native of Wales. This marriage took place in 1727. Shortly afterwards, he appears to have discovered, that agriculture offered greater chances of providing for a growing family, than the manufacture in which he was engaged; for we find him, in 1730, retiring from the latter business. With the funds derived from the sale of his property at Germantown, he proceeded, in that year, to the township of Norriton, where he commenced a settlement upon a small farm,

of which his means were sufficient to enable him to become the owner. His residence, however, does not appear to have been permanently fixed at Norriton, until after 1732; for his three elder children were born at Germantown. Among these was David, the subject of this memoir, who, although not the first born, was the eldest child who survived the age of infancy.

One of the former biographers of Rittenhouse has endeavoured to account for his abilities, by supposing that he derived them by descent from the mother's side. In this he seems to have adopted the popular opinion, which denies to persons of pure Dutch descent any claim to talents of the higher order. This opinion is, however, no more than a prejudice, which any inquiry into the annals of our country might have dissipated. It may indeed be admitted, that the settlers of the New Netherlands made a less careful and less extensive provision for the education of their children, than was done by the descendants of the Pilgrims; and to this want of foresight we may fairly ascribe any difference in the intelligence of the several masses of people. But, in comparing those classes whose wealth gave them the power of commanding the higher kind of education, Holland has no reason to blush for her descendants; and the number of intelligent and learned individuals of Dutch

extraction is only small, because the population whence they are derived is less numerous, than that with which it is thus invidiously compared. The United Netherlands were distinguished, at the time when the ancestors of Rittenhouse emigrated, for high attainments in science and the useful arts. The very business in which they had been engaged in the place of their nativity, and which they so speedily resumed in America, may almost serve as a proof, that they were devoid neither of education nor ability. Still, talent is not hereditary in families; and it often happens that we are wholly at a loss to account, by any circumstances of parentage, for the peculiar genius of individuals. So far from there being a transmission of abilities by natural descent, nothing is rarer than to find successive generations of the same family equally distinguished; and, on the other hand, it often happens that a single individual may shed lustre upon a name, which may be almost disgraced by his nearest relations.

The mother of Rittenhouse is described as a woman of uncommonly vigorous and comprehensive mind, but as almost wholly deficient in education. If, therefore, we are to seek in his genealogy for the cause of his distinction, it is rather to be found in the fact of his deriving his descent from two races of distant origin. The

effect of such a mixture of races is well illustrated in the character of the people of Great Britain ; and the same cause seems to be at work in producing that peculiar activity of mind which marks our own countrymen, into whose veins blood derived from almost every nation of any intellectual eminence in the old world has been successively transfused. From such parents, and of such lineage, DAVID RITTENHOUSE derived his birth, which took place at Germantown, Pennsylvania, on the 8th of April, 1732.

## CHAPTER III.

*His Education.—Early Indications of Mechanical Genius.—Remarkable Progress in Mathematical Learning.*

No records or traditions remain of the manner in which Rittenhouse obtained the elements of learning. His education, however, could not have been neglected; and what public instruction, in the imperfect form it must have borne in a remote district of a newly settled country, denied, seems to have been supplied by the tuition of a maternal uncle. This near relation, although exercising the humble trade of a joiner, appears to have been gifted with a taste and capacity for scientific pursuits. Circumstances made him an inmate in the family of the elder Rittenhouse, and in this abode he died. His books and papers passed thereupon into the custody of his nephew David, along with his tools of trade. Among his books were found elementary treatises on mathematics and astronomy; and in addition he left numerous manuscripts, in which were contained models of calculation and investigation.

The death of his uncle took place when Rittenhouse had attained his twelfth year. Whether

in continuation of former studies, or in consequence of the interest excited by the treasures which came by this event into his possession, he seems from that time to have devoted his whole mind, and every opportunity of leisure, to the pursuit of the studies in which he afterwards became distinguished. The son of a farmer, in comfortable, but by no means affluent circumstances, it became imperative, that he should share in the labors of agriculture; and this was the more necessary, as his father entertained a desire that he should pursue the occupation of a farmer. Even when engaged in agricultural labors, however, the bent of his genius was not to be restrained; and it was recollectcd by his brother, that in his fourteenth year he was in the habit of covering the fences of the farm, and the implements of husbandry, with numerical figures and diagrams, unintelligible to his rustic associates.

Mere abstract investigations did not, however, engross his whole attention. The tool-chest of his uncle supplied him with the instruments for practice in the mechanic arts; and he appears to have applied his severer studies to practical purposes, at every possible opportunity. Thus it is recorded of him, that, as early as in his eighth year, he had made a model of a water-mill, and, at no long period after the death of his uncle, he

undertook and succeeded in the construction of a clock. The material of both of these early evidences of his ingenuity and knowledge was wood. But he almost immediately after the last-mentioned instance of successful ingenuity, undertook the bolder task of framing a timekeeper in metal ; and this he also successfully accomplished.

Among the books he inherited from his uncle was an English translation of the "Principia" of Newton. Such was the progress which he made in mathematical knowledge, although now destitute of any aid, that he was enabled to accomplish the perusal of this work, for the proper understanding of which so much acquaintance with geometry and algebra is necessary, before he had attained his nineteenth year. Newton, as is well known, from deference to the practice of the ancient philosophers, adopts in this work the synthetic method of demonstration, and gives no clue to the analytic process by which the truth of his propositions was first discovered by him. Unlike the English followers of this distinguished philosopher, who contented themselves, for a time, with following implicitly in the path of geometric demonstration, which he had thus pointed out, Rittenhouse applied himself to search for an instrument, which might be applied to the purpose of similar discoveries, and in his researches attained the principles of the

method of fluxions. So ignorant was he of the progress which this calculus had made, and of the discussions in relation to its invention and improvement, that he for a time considered it as a new discovery of his own. In this impression, however, he could not have long continued ; as he made, in his nineteenth year, an acquaintance, who was well qualified to set him right in this important point.

In the year 1751, the Reverend Thomas Barton became an inhabitant of Norriton. This gentleman had just completed his education at Trinity College, Dublin, and been admitted as a clergyman of the Episcopal Church. Passing to America in pursuit of preferment, which want of powerful connexions denied him in Europe, he became for a time the teacher of a school at Norriton. Although Mr. Barton was principally distinguished as a classical scholar, he was also well grounded in all the elementary mathematics then considered necessary in the undergraduate course of the institution, where he received his education. Exiled as he must have felt himself from literary society, the discovery of a neighbor of such intelligence as Rittenhouse was a matter of no little pleasure ; nor could the latter have felt less joy in finding at last an associate with whom he could communicate on his favorite studies. The difference in their ages was but two years ; and,

when we take into view the more rapid development, both of body and mind, which is usual in our climate, this difference was probably insensible. A strong intimacy speedily took place, which ripened into friendship ; and this friendship was farther cemented by an attachment, which Barton formed for the sister of Rittenhouse, who subsequently became his wife. This intimacy with Barton was attended with valuable consequences. Desirous to peruse his admired Newton in the original dress, Rittenhouse now applied himself to the study of the Latin language, which he speedily mastered. He also appears, under the instruction of Barton, to have acquired the elements of Greek, although he never attempted to become a proficient in the literature of that tongue. Barton also had it in his power to communicate to Rittenhouse scientific works of more modern date, than those to which his previous studies had, from circumstances, been confined, and treating of a greater variety of subjects. Setting forth from his native country with the intention of devoting himself to the profession of a teacher, the former had provided himself with a well-selected library, not only in classical literature, but also in the pure and mixed sciences. These were freely imparted to his youthful and ardent associate.

Before two years had elapsed, the success of

Barton as a teacher, attracted the attention of the government of the College of Philadelphia. He was in consequence called to fill a professor's chair in that institution. The collections of the College were therefore placed at his disposal, and he did not hesitate to use his privilege for the advantage of him, who had now become his brother-in-law. Barton had also projected a circulating library before he quitted Norriton. This project was accomplished, and Rittenhouse took an active part in its management. By this a fund was obtained for the purchase of useful works, which neither could have afforded to procure from his own resources.

Barton had not long filled his chair in the University, when it became necessary for him to visit Europe. He on this occasion was commissioned by Rittenhouse to purchase an additional supply of books. This commission he faithfully fulfilled.

Such was the aid which Rittenhouse derived from his brother-in-law; but this, however valuable in communicating a knowledge of the existing state of science, and in opening a channel through another language, by which to reach the thoughts and learning of the master spirits, both of antiquity and modern times, (for Latin had not ceased to be the conventional language of science,) had no effect in determining the inclinations of

Rittenhouse for mathematical and physical studies. The acquaintance with Barton was therefore both useful and profitable, but exercised a far less important influence on the future life of Rittenhouse, than has been frequently ascribed to it.

The more, indeed, we contemplate the early life of Rittenhouse, the more our admiration is excited. With such elementary knowledge only as could be obtained at the school of a remote settlement; under the parental discipline of a father, who rather discouraged than aided his studies, and of an illiterate, although strong-minded mother; possessed of no books but those of an humble mechanic; he persevered, until he had, step by step, mastered all the truths of mathematical science, and had arrived at the principles of that calculus, for the honor of whose invention a Newton and a Leibnitz had contended. At the same time, with no tools but those of a country joiner, and aided by no instruction except from books, he had attained such skill in practical mechanics as to execute the delicate mechanism of a timekeeper.

## CHAPTER IV.

*His Agricultural Occupations.—Choice of a Profession.—Entrance into Business.—Laborious Pursuit of his Trade and Scientific Studies.—Consequent Injury to his Health.—Becomes known as an Artist and an Astronomer.—His Marriage.*

THE father of Rittenhouse had always intended that his eldest surviving son should pursue the same plan of life which, on his retreat from his manufactory, he had chosen for himself. He had, on leaving Germantown, become, as we have already stated, a farmer, and for this occupation he destined our philosopher. The term farmer, it may be mentioned incidentally, bears a far different signification among us, from that which its derivation would seem to warrant, or in which it is understood in Great Britain. By this word we understand, not the tenant, either at pleasure, or on some more secure tenure, of a more wealthy landlord, but most frequently the independent cultivator of his own fields. The condition of a tenant is in truth extremely rare in all parts of the United States.

In the avocations necessary in this mode of

life, Rittenhouse had been laboriously employed, from the moment his strength was sufficient to perform them ; and the studies and mechanical operations of which we have spoken, were no more than the pastimes of those intervals of leisure, which so frequently occur in agricultural life in the United States. When the mind of Rittenhouse became so far matured, as to fit him for reflecting upon the plan of his future life, his reason led him to disapprove of that pointed out by his father. He had discovered in himself powers of higher character, than are necessary for the occupation of a farmer ; and, encouraged by his success in the construction of a complete timekeeper, he resolved, could his father be prevailed upon to give his consent, to choose for his profession that of a clock-maker. This branch of the mechanic arts was, at that time, little practised in the colonies, and it does not appear that there were any means within his reach for obtaining instruction in it. His reasons finally satisfied his father of the propriety of this contemplated course.

The choice of Rittenhouse was directed by no little wisdom and modesty. Had his mind been tinctured with vanity, it is probable that he would rather have sought to make those studies available, in which he had, by this time, made no mean proficiency, than have undertaken an apprentice-

ship, for we might so style the practice of an art, in which his highest efforts, when compared even with the less perfect instruments of that period, were no more than the playthings of an ingenious, and perhaps precocious boy. Years of toil and patient labor must have appeared in perspective, before he could obtain a competent degree of skill; and without it the reputation, by which alone fortune, or even competence, could be secured, was inaccessible. Such thoughts, however, did not deter Rittenhouse; and, the consent of his father being finally obtained, along with funds to purchase a part of the necessary tools and instruments, he opened a shop in the year 1751. This was a small building erected for him on his father's farm; and he speedily stocked it with instruments, the work of his own hands, more perfect than any which could at that time be bought in Philadelphia.

The art of clock-making was at that time far from having reached the degree of perfection it has attained of late years, partly from the great extent to which the division of labor has since been carried in it, and partly from the valuable improvements which it has derived from the discoveries of physical science. To improve the art by introducing a division in the labor, neither entered into the views, nor was within the means of Rittenhouse. Such division can only be

carried into effect by the resources of wealth and capital, of which he had little. But the search for improvement, by the application of physical science, had already been entered into; and Rittenhouse might fairly hope, that the knowledge he had previously acquired might be advantageously applied to the profession he had chosen. The compensation pendulum of Graham, which has of late asserted its equality, if not its superiority, over all others intended to subserve the same purpose, had indeed been invented more than twenty years before. But his cotemporaries did not appreciate the merits of the discovery, and it was forgotten or neglected. Harrison and Leroy had not made public their inventions, and the field of investigation appeared to be open. The art of clock-making, therefore, not only presented a trade, interesting in itself, and capable of affording a decent livelihood, but also demanded, in order that it should be pursued with success, that he should continue the study of those physical and experimental sciences, by the progress of which the instrument could alone be perfected. His astronomical studies had taught him the value of the clock in the practical part of that science, a value so great as to render it the indispensable companion of an observer; and he was aware that he could not deliver his pieces of nicest workmanship to the purchaser, until

their rates had been ascertained by reference to the motions of the heavenly bodies. He therefore saw in his intended trade, not only an opportunity, but a necessity, for continuing the study of the sciences in which he delighted.

For the space of seven years Rittenhouse devoted himself most assiduously to his trade, and the studies he saw to be connected with it. The whole of the day was steadily employed in the former; time for the latter was stolen from his hours of repose. Up to this time his constitution, fortified by agricultural labor, and exercise in the open air, had been robust and vigorous. But such intense and unremitting exertion was not without evil effect upon his health; and this was probably aggravated by the contrast, which a wholly sedentary life presented to his former active pursuits. He finally was affected by a complaint, the prominent symptom of which was a continual and disagreeable sensation of heat in his stomach. He was, in consequence, compelled to abandon for a time the pursuits in which he had so earnestly engaged. A short period of relaxation sufficed to restore him, if not to his pristine health, at least to such a degree of it, as enabled him to resume his business. But the complaint was not wholly overcome; it continued to afflict him from time to time throughout

the rest of his life, and was finally the cause of his abandoning the exercise of his art.

Pursuing his trade with such unwearied assiduity, it is not surprising that he speedily acquired reputation for the accuracy and perfection of his workmanship. This reputation was spread abroad by the numerous highly-finished pieces of mechanism which issued from his workshop, bearing the maker's name inscribed upon their dials. His neighbors too were not slow to note the attention he paid to observations of the heavenly bodies, which he extended far beyond those absolutely essential for the rating of his time-keepers, and spread his fame throughout their limited circle as an astronomer. It was now that the good offices of his friend Barton were again exerted. Knowing well the ability of his brother-in-law, he watched with earnestness his almost daily progress in manual dexterity and scientific knowledge. In the more extended circle in which he moved, he found those who could fully appreciate all the skill and knowledge of Rittenhouse. With these he brought him in contact, to the mutual pleasure of both parties. From such associations Rittenhouse derived no little benefit, in obtaining a channel through which his merits could be made more extensively known. Among those who may be mentioned as the early friends of Rittenhouse, were Dr. Smith, the

provost of the College of Philadelphia, and John Lukens, surveyor-general of the province. Their official positions rendered them the organs of the government, when a demand for astronomic knowledge arose for public purposes ; and they conferred no trifling public benefit, when they pointed out the capacity of Rittenhouse.

While thus engaged in the pursuit of his occupation, Rittenhouse long remained an inmate of his father's family. Here his labors were gradually acquiring for him provision competent to his moderate desires.

After the lapse of thirteen years from the time of his entering into business, his father made him proprietor of the paternal mansion, retiring himself to Worcester, where he had purchased another farm. Thus having attained to independence, he sought a wife, and, in the year 1764, married Eleanor Colston, the daughter of a respectable farmer of the neighborhood. This marriage appears to have been a happy one ; and the loss of his consort, after several years, produced so great a depression in the spirits of the surviving husband, as to call forth the remonstrances of his friends.

## CHAPTER V.

*Boundary Line of Pennsylvania, Delaware, and Maryland. — Mason and Dixon's Line. — Boundary of Pennsylvania and New York.*

RITTENHOUSE had hardly begun to attract the attention of the intelligent society of Philadelphia, when an occasion presented itself for applying his peculiar talent and knowledge to use in the public service. The several States, of which the American Union was first composed, held their respective territories by grants from the British crown. In the absence of a topographical knowledge of the countries granted, it had been customary to define the limits of the several charters by lines traced upon a map, and defined either by geographical terms, or even by more arbitrary methods. In the subdivision, which in some cases took place, of the original grants, similar lines were chosen to define the manner of partition. These lines were in most cases parallels of latitude, or portions of a meridian, traced in some given degree of longitude. However easy it may be to delineate such lines upon a map, to trace them upon the ground is a business of no little labor, and requires no small degree both of astronomic and geometric skill.

The tenure, by which Penn and his descendants held their possessions, was defined by lines of this character. He had in the first instance purchased a territory included within a circle, drawn around a point in the town of Newcastle, as a centre, with a radius of twelve miles. This had been subsequently extended to the south by drawing a meridian line tangent to this circle. By a farther grant he had acquired all the territory extending westward from the Delaware between certain parallels of latitude, for the distance of five degrees of longitude. All these contemplated boundaries were as yet merely matters of parchment record, or geographical description; but the place where the lines existed was in some cases wholly unknown, in others, but imperfectly guessed at. The part of this boundary, which most early attracted the attention of the interested parties, was that, which separated the territory held by Penn as proprietor, from that belonging to Lord Baltimore, and particularly the limits of the present States of Delaware and Maryland. As early as 1735, this boundary had become the subject of a suit in the British court of chancery, and after fifteen years of delay a decree had been awarded. By this decree the parties were directed to enter into a formal written agreement to have the lines traced upon the ground. This agreement, how-

ever, was not executed until 1760, and no joint action was had under it until 1769. But in the last-mentioned year Messrs. Mason and Dixon were sent out from England, as commissioners, for the purpose of carrying the agreement into effect.

In the proceedings before the court of chancery, the Penn family had been the complainants. Their interests were far more deeply involved in the decision, than those of the opposite party; for the wise institutions of their ancestor, and the repugnance of the settlers under them to slave labor, had rendered each acre within their proprietary jurisdiction of much greater value than in the lands held by Lord Baltimore. They were therefore unwilling to await the slow course of chancery proceedings, but determined to examine the question for themselves; knowing, that, when a boundary was defined in scientific terms, it was only necessary to cause it to be traced by men of competent attainments, and no important difference could arise in the subsequent determination by a joint action.

The governor of the province of Pennsylvania was therefore directed to seek out a competent person, to whom this important task might be intrusted. The most difficult part of the boundary was no doubt that defined by a circle, having a radius of twelve miles around the town

of Newcastle, as a centre, and the problem was entirely new in practical geometry. To this the attention of Rittenhouse was first directed by the Proprietary government, not only as the part of the division line which was involved in the greatest uncertainty, but because it passed through lands at that time more accessible and therefore more valuable than any others in dispute. The appointment to this important task bore date in 1763, and he was engaged in it for some months in the following year. It was performed so much to the satisfaction of his employers, that he was proffered, and received, more than the stipulated compensation. It does not appear, that on the subsequent arrival of the commissioners appointed by the British court of chancery, it became necessary to change the locality of any part of this line, although they were furnished with the best instruments which Europe could then produce, and one of them was already highly celebrated as an accomplished observer, while the American topographer had no instruments that were not the work of his own hands, and was as yet unknown to fame.

The British astronomers, Messrs. Mason and Dixon, seem therefore to have contented themselves with running the meridian tangent southward, and the parallel of latitude westward, until it intersected the meridian traced north-

ward from the source of the north branch of the Potomac. They thus defined the boundaries of the present States of Maryland and Delaware on the one hand, and of Pennsylvania and Delaware on the other. This operation has become famous on more than one account. The tracing of the meridian line between two given latitudes, both of which required accurate astronomic determination, over a country nearly level, afforded an opportunity for actually measuring the itinerary length of the arc in question. This measure is still quoted as one of those whence the magnitude and true figure of the earth are to be deduced, and is the only case where the length of a degree of a meridian has been actually measured ; for, in all other instances, the determination has been made, by measuring a base of a few miles, and calculating the whole length by means of a series of triangles. The parallel is well known in American politics, as it forms the separation between the States to which the names of Middle and Southern are applied, and is the boundary between the region in which domestic slavery is still recognised by law, and that in which it has been abolished.

The previous observations of Rittenhouse seem to have greatly facilitated these operations of Mason and Dixon ; but, as the official report is made by them, and could have authority only

when so made, the connexion of our own countryman with this important question is but little known, and rarely mentioned even among ourselves.

That geographical and geometric lines should have formed the divisions of the original provinces, and thus of the States, has exercised an influence upon the destinies of our country, which is not the less evident, because it has rarely been noticed. In most of the disputes concerning land titles derived from different authorities, or concerning territorial jurisdiction, it has not been necessary to have recourse to civil violence or hostile arms. The *ultima ratio* has been not the cannon or the bayonet, but the plumb-line, the clock, and the telescope. Even courts of civil authority, where such have had jurisdiction, have been appealed to, only to cause one or other party to perform his duty, or to commission the astronomic surveyors by whom the determination was made. The habit has thus been created of referring to reason and science for the composition of all disputes; and this is so firmly established among the people, that even the folly of their rulers, as was manifested in a recent instance, cannot bring them to refer the matter to the decision of arms. That this habit has become a part of the character of our people, is in a great measure due to the confidence created

by the fidelity and accuracy with which the earliest operations of the sort were performed. From the delineation of Mason and Dixon's line to the present time, both State governments, although this portion of their sovereignty has been reserved, and individuals, who have occasionally suffered hardship, have bowed in obedience to the decision of the astronomer. Rittenhouse was the first American, who was employed in the delineation of such lines; he was also most extensively engaged in tracing them, and, with those formed under his instruction, actually defined nearly all the important division lines within the chartered limits of the thirteen original States. Most of these delicate and valuable operations were however performed at a later period of his life, and after the close of the revolutionary war. The account of them will therefore fall into a subsequent chapter of this memoir. One alone is connected by date with that of which we have just spoken.

This was the determination of the division line between New York and New Jersey, and thus of the point whence the parallel, which divides the former State from Pennsylvania, was to be traced westward. The northern limit of New Jersey upon Hudson's River is the forty-first degree of latitude. The point where this parallel intersects the shore was fixed by Rittenhouse in

the year 1769, at the request of a board of commissioners, deriving their authority from the legislatures of the provinces of New York and New Jersey. The northern limit of both Pennsylvania and New Jersey, upon the Delaware, is the forty-second degree of latitude; and this parallel, continued westward, divides the former from New York. To determine the place where this parallel intersects the Delaware, Rittenhouse received the appointment of commissioner from his native province, and was met by a gentleman named on the part of the province of New York. This appointment also included the duty of running the parallel westward, but nothing farther was done at the time (1774), than to determine the point of departure upon the Delaware.

## CHAPTER VI.

*Experiments on Expansion. — Application of them to the Pendulum. — Metallic Thermometer. — Experiments on the Compressibility of Water. — Adaptation of Planetary Machines to Clocks. — Project of an Orrery.*

FOR the sake of connecting with each other the geodetic operations of Rittenhouse performed previous to the revolutionary war, we have departed from the order of time. We shall now return, for the purpose of mentioning various other scientific occupations in which he was engaged, between the date at which he was first employed upon the boundary of Maryland, and that at which he became a commissioner to define the line between the States of New York and Pennsylvania.

To a person engaged in the manufacture of clocks, and occupied in determining their rates by astronomic observations, the influence of variations of temperature upon the oscillations of pendulums becomes at once apparent. That this is owing to the expansion and contraction of the materials of which the pendulums are composed, under alternations of heat and cold, was well

understood. Partial remedies, too, had been applied; but they had not yet been rendered as available as they might be, for want of a sufficient number of well-conducted experiments. If such had been made, they had not been recorded or published. At the present time, we can refer to no observations of earlier date than those of Rittenhouse, which are worthy of confidence, except a few of Muschenbroeck and of Smeaton. The latter were only made public in 1754, when we have reason to believe that Rittenhouse had already made some progress in his researches. That he entered into this investigation experimentally and pursued it with no small success, we have abundant evidence. The first volume of the "Transactions of the American Philosophical Society," published in 1770, contains a paper of his on expansion by heat; another paper on the same subject is noted by Rush as existing in their archives, and is probably that on the improvement of timekeepers, in the fourth volume. The accuracy of his experiments is demonstrated by the various astronomic clocks, which were constructed by his own hands, or under his direction, in which original forms of compensation pendulums were employed. In this respect, Rittenhouse was somewhat in advance of the applications of science in Europe. The mercurial pendulum, which is now admitted to be the best

compensation for a fixed observatory, had indeed been invented by Graham in 1726; but this important discovery had been neglected and almost forgotten. The account of the gridiron pendulum, which was the first that came into familiar use in Europe, was not published by Harrison until 1775. Rittenhouse himself, however, in a letter dated in 1768, refers to Harrison's time-keepers as having been executed in 1765. If, then, he was aware of the discoveries of Graham and Harrison at the time he commenced his own researches, he did not content himself with a servile imitation, but entered into experiments on which to found his own practice, and struck out a method of compensation different from either.

Another valuable application of a correct knowledge of the relative expansions of solid bodies also occurred to Rittenhouse, and he carried this application into successful practice. In this he forestalled, in the career of discovery, Breguet, who, within the present century, has received no small praise for the re-invention of a forgotten instrument of Rittenhouse's. We refer to the metallic thermometer. It is in evidence, that, in the year 1769, the latter constructed an instrument, in which, by the expansion of metals, a hand was made to traverse on a semicircular dial-plate, on which were marked the degrees of Fahrenheit's thermometer, and that it corre-

sponded in its indications with the mercurial instrument. Here then we have his experimental knowledge brought to a severe practical test, and applied to an important purpose.

The Florentine Academy had, by an experiment, all the circumstances of which could not be reached, inferred the incompressibility of water. The accuracy of this inference remained for a long time unquestioned. It may be doubted, whether the whole scientific world rejected the Florentine experiment until very recently, when the experiments of Oersted and Perkins have demonstrated the compressibility of water beyond all cavil. The question was at least still open in the days of Rittenhouse, and he proceeded, in 1767, to examine it for his own satisfaction. In doubting the results of the Florentine philosophers, he was not however original ; the subject had already been examined by Canton in England, and by Kinnersley, at that time a professor in the College of Philadelphia. But, as the question was not yet admitted to be settled, merit is still to be attributed to one who brought the aid of his powers of research to the investigation of an important question in physical science ; an investigation which he pursued by means of his own contrivance, and illustrated by experiments of great ingenuity.

The merits of Rittenhouse, not as a mechanic

only, but as a successful improver of physical science, now became apparent to his countrymen. His rising reputation is manifested by the compliment paid him in 1767 by the College of Philadelphia, by which the honorary degree of Master of Arts was conferred upon him at the public commencement. At a time when the distinction in points of useful knowledge, between those who had received the advantage of a public education and those who had not, was still marked, this act implied a higher degree of acknowledged merit, than would be inferred from a similar diploma at the present day. It was therefore not only a deserved compliment, but a passport to the realms of science.

In the pursuit of his mechanical vocation, Rittenhouse had complied, as was necessary, with the prevailing taste. His clocks were not only accurate as timekeepers, and furnished with the apparatus for striking the hours, but they frequently contained chimes, and other arrangements for performing pieces of music. Among other embellishments, he had adapted to one of his timekeepers a small planetary machine, in which the mean motions of the bodies of the solar system were made to keep their proper rate with the time marked by the instrument. The calculations, into which it became necessary for him to enter as a preparation for this toy,

appeared as capable of application on a larger scale. He, in consequence, in 1767, projected the instrument, which, perhaps improperly, is known under the name of his Orrery.

Machines, by which the apparent motions of the heavenly bodies could be represented, are of remote origin. Among the ancients they had even been brought to such a degree of perfection, as to be capable of use in the prediction of eclipses, and of other phenomena, with an accuracy as great as that of any other known method. The great improvements made in modern astronomy had rendered them useless for any such purpose; and, confined to the representation of appearances alone, the mechanic spheres of the ancients were rejected as giving false notions of the structure of the universe. Still, planetary machines were not the less in request, and it was attempted to give, by means of them, an exhibition of the true relative motions and distances of the bodies of the solar system. The most celebrated machine of this character was constructed by Rowley for the head of the family of Boyle, a name of no little lustre in the annals of science. This nobleman bearing the title of Earl of Orrery, the instrument was introduced to the public under this name, which still continues to be applied to all those intended for similar purposes. By this name also did Rittenhouse propose to designate his projected

piece of mechanism. In his views, however, he was actuated by a much higher ambition than has ever stimulated any other person, who has attempted to exhibit the mechanism of the universe by the aid of the workmanship of human hands.

Abandoning all attempts to exhibit the imaginary celestial sphere, a mode of representing appearances, which is no more than a projection in orthographic perspective upon a surface supposed to be infinitely distant, he retained no other portion of it but the zodiac. He wisely saw the immense difference, which must result between the true geocentric places of the bodies themselves, and those which would be represented by any instrument enclosed within a skeleton sphere. His mimic planets were not made to revolve in circular orbits with uniform motion, but were caused to describe ellipses in conformity to the laws by which Kepler had completed the theory of Copernicus. So far from being content with a mere approximation to the relative motions, he conceived the design of regulating them to each other with such accuracy, that his instrument might be used in the place of tables for predicting the places and phenomena for any given epoch. Bold and novel as were these designs, Rittenhouse proposed to carry them into effect, if not in such a manner as to supersede the use of astronomic tables, yet so as to give to calculators

a valuable check upon their numerical computations. The motions of his mimic planets were to be so registered upon proper dials, as to give not the mean heliocentric places, but the true anomalies, defining the positions in elliptic orbits, both as seen from the sun and from the earth for twenty-five centuries before, and as many after, the date of its construction. If, then, we should ascribe, as some have done, to the orrery of Rittenhouse no higher place among physical instruments than that of an ingenious philosophic toy, we must admit that he exhausted in its construction all the existing knowledge of astronomy, and applied this extensive scientific information, with the most consummate practical skill.

From the time at which the orrery was projected, until it was actually completed, Rittenhouse was exposed to many interruptions. These, however, are so little to be regretted, that we consider them as having furnished him with the means of establishing his future fame upon a basis far more sure than any such application, even of the highest science, and the most perfect mechanical dexterity.

## CHAPTER VII.

*Preparations for Observing the Transit of Venus.*

UP to the year 1768, we have no records of the astronomic observations of Rittenhouse. They had been limited to such as were necessary for regulating his timekeepers, or were called for in tracing the boundary lines, for the determination of which his practical and theoretic skill had been resorted to. In the practice of such observations, and in the execution of the public trusts confided to him, he had gradually acquired much dexterity in the management of instruments, and facility in calculation. The year 1769 presented an opportunity, in which his practised powers of observation and computation might be applied to an important purpose. This year is rendered memorable in the annals of astronomy, by the recurrence of that rare phenomenon, the transit of the planet Venus over the Sun's disk.

From the time that the truth of the Copernican system had been universally admitted, it was known that this planet must, at every succeeding interval of about five hundred and eighty-four days, be in inferior conjunction with the sun.

Whether the planet shall be exactly interposed at this time between the body of the sun and the earth, in such manner that it may be seen, by the aid of proper instruments, passing over the disk of the former, will depend upon the inclination of the orbit of the planet. As this inclination is considerable, the phenomenon of such a passage was inferred to be at best a rare one. Before the telescope was adapted as a sight to graduated instruments, and great public observatories were established at national expense, the tables which gave the inclination of Venus' orbit were far from agreeing. An Englishman of the name of Horrox, however, placing reliance upon the Rudolphine tables of Kepler, ventured to predict a transit of this planet for the year 1639. The result verified his prediction, and he, with a friend of the name of Crabtree, was fortunate enough to see this rare and curious phenomenon, of which they alone were witnesses. The improvement in the tables of the elements of the orbits of planets, made in consequence of the establishment of the observatories of Paris and Greenwich, enabled astronomers to predict with certainty transits for the years 1761 and 1769. No other can again take place until the year 1874. The phenomenon, from its extreme rarity, is therefore one of the greatest interest in astronomy. Far greater importance had, however, been given to the

phenomenon of the transit by the remark of Halley, that observations of it, made either at a single favorable position, or in remote parts of the earth's surface, afforded the best possible data for calculating the dimensions of the solar system ; for, by means of them, the horizontal parallax, both of Venus and the sun, may be determined, and thence their distances, in terms of a semi-diameter of the earth, become capable of calculation in the most easy way.

The transit of 1761 was visible in Europe, and in other parts of the eastern continent. Its approach was looked for with great anxiety, and imposing preparations were made for observing it. Not only were such measures taken at the great observatories of Europe, but observers, furnished with the best instruments which the existing state of the arts would supply, were despatched to St. Helena, to the Cape of Good Hope, to Tobolsk, to Calcutta, to Madras, and to Tranquebar. The governments of France, England, Russia, and Denmark seemed to vie with each other in zeal ; and no expense was spared to make the observation complete, by which the truth of the Copernican system might be brought to ocular demonstration, the laws of Kepler reduced to experimental proof, and the vast distances and dimensions of the solar system included in a problem, as simple in form as the easiest case of trigonometry. No part of the

transit of 1761 was to be visible in the continent of America ; but, in the island of Newfoundland, the sun would be seen to rise before the emergence of the planet from his disk. As this was the only spot in the western hemisphere, where an observation could be made, Professor Winthrop, of Harvard University, was sent to St. John's, in that island, furnished with the proper instruments by the liberal grant of the colonial Assembly of Massachusetts. In fine, wherever the transit was to be visible, and this was in every part of the civilized world except America, every amateur astronomer, as well as those who made that science their profession, endeavored, to the utmost of his means, to take advantage of the rare occasion.

Notwithstanding such imposing and costly preparations, the transit of 1761 ended in disappointing every hope. Some of the most practised observers, particularly those stationed at the great fixed observatories, lost the view altogether, in consequence of the weather ; a very considerable discrepancy existed among the observations of others ; and, upon the whole, the determination of the parallaxes was admitted to be inconclusive. It was indeed remarked, that, by throwing out four of the observations altogether, the rest might be made to agree, or that the same might be done, by supposing, what occasionally happens, that each of these four observers had noted the wrong minute, in

writing this element of time in front of the second marked by his clock. That this was the case, has now been established, beyond the possibility of doubt ; but, to correct, in this apparently arbitrary manner, a large proportion of all the observations, which the state of the heavens permitted to be made, would hardly have been justified by any of the laws of probability.

Such an unfortunate result of the transit of 1761 served to make that of 1769 of far greater interest than had attached even to the former. The hopes of astronomers having been once frustrated, anxiety became mingled with expectation ; and this anxiety was enhanced by the consideration, that but a small part of the transit of 1769 was to be visible to any of the great observatories of Europe. At Stockholm, London, Paris, Lisbon, and Madrid, the immersion might be seen just before sunset, and the emersion at Petersburg soon after sunrise on the following morning, but at no other European capital. In the northern frozen zone, beyond the latitude of sixty-seven and a half degrees, the sun was not to set on the day of the transit ; the whole of the phenomenon would therefore be visible ; and at Wardhuys, in Lapland, where the observation would be included between the hours of half past nine in the afternoon and three in the morning, the circumstances would be the most favorable possible.

In less high northern latitudes, near the same meridian, the beginning might occur before sunset, and the end take place after sunrise. Such a position was found at Cajaneburg in Sweden.

Maskelyne, the British Astronomer Royal, seeing that advantages, such as were presented by the last-mentioned places could be secured by the comparison of observations made at two different points, one in the southern, the other in the northern hemisphere, induced his government to despatch two expeditions, the one to Hudson's Bay, the other to Otaheite. The latter was under the command of the celebrated Cook.

The French government, at the instance of Lalande, sent Chappé to California; here the immersion was to take place when the sun was on the meridian, and, at that season, not far from the zenith.

Even at Pekin, although only the last contact was to be visible, the European astronomers of the imperial observatory were aided and excited to the task. It may be here mentioned, that a great degree of jealousy, and consequent mystery, attended the preparations of the several governments. This appears to have arisen from the arrogance of Lalande, who wished to assume the direction of the whole, and expressed his expectations that the records of the observations should be sent to him for calculation. The choice of

the stations of Otaheite and Wardhuys was therefore carefully concealed from him, until it was too late for him to abandon the less favorable position of California, for another.

The position of Pennsylvania offered advantages of another description ; the whole of the transit was to be visible, beginning before, and terminating after noon. It was thus to occur at hours when less disturbance was to be feared from fogs and vapors, than in the north of Europe ; while the effects of the parallax, it was hoped, if less than at Cajaneburg, Otaheite, or Wardhuys, might be sufficiently marked to admit of favorable results in the subsequent calculations. At all events, it would be a subject of mortification, that so important a phenomenon, visible throughout its whole duration to the three British colonies in America, should be permitted to pass unnoticed, except by idle curiosity ; while a successful observation, and the calculation of the important results, would redound to the scientific reputation of the whole of the provinces.

Such reflections did not escape Rittenhouse, and while he felt his own capacity to perform the necessary operations unaided, and had prepared with his own hands most of the more essential instruments, he showed himself unwilling to attempt to engross the whole honor, and manifested a laudable anxiety to have the means of

observation so far multiplied and distributed, that the risk of failure from unfavorable weather, or any other contingency, might be as much diminished as was possible. He therefore communicated to the Philosophical Society of Philadelphia a calculation of the anticipated times and phenomena of the transit, as likely to be visible at Norriton, and called the attention of that learned body to the important subject. It cannot be doubted that the members of that Society, who afterwards distinguished themselves by performing a part in the observation and subsequent calculations, were aware of the importance of the occasion ; but the matter appears to have been first brought before them in a tangible shape by the communication of Rittenhouse ; and this communication, showing them that they had in the vicinity, both many of the instruments, and an expert observer and calculator, seems to have served as a stimulus to their zeal, by exhibiting the possibility of attaining high honor, where the gratification of a laudable and enlightened curiosity had alone been thought of.

## CHAPTER VIII.

*Observation of the Transit of Venus.—Calculation of the Parallax of the Sun.*

PREVIOUS to the year 1768, Philadelphia had not only become the seat of a highly respectable seminary of learning, which has since by gradual expansion become a thriving university ; but had been chosen as the place of meeting of a scientific association, which still flourishes under the name of the American Philosophical Society. Although members of this association resided in various parts of the colonies, the intelligence of the citizens of Philadelphia gave them no ill-founded claim to the choice of their city as the scientific centre of the Union, and this choice has been justified by the share which they have taken in its proceedings and published memoirs. To this learned association the communication of Rittenhouse on the subject of the transit of 1769 was addressed. The American Philosophical Society seems to have appreciated fully the interest of the subject, and to have entered zealously into measures of coöperation. In order that preparations might be made, adequate to the importance of the occasion, a large committee was, on the

7th of December, 1768, chosen from among the members. Of this committee, Rittenhouse was one. The committee lost no time in assembling, in order to plan the most expedient mode of carrying the purposes of their appointment into effect. Three places of observation were immediately selected. The first of these was the State-house Square of Philadelphia; the second, Cape Henlopen, at the mouth of the Delaware; the third was Norriton, the residence of Rittenhouse. The charge of making the observations at Cape Henlopen was intrusted to Mr. Orren Biddle; Professor Ewing of the College, and Dr. Hugh Williamson, were appointed to the Philadelphia station; while Provost Smith and Mr. Lukens were associated with Rittenhouse at Norriton.

The proprietaries of the province, the colonial legislature, and the public institutions of Philadelphia furnished aid with great liberality to the important object. The station at Cape Henlopen was provided with an excellent telescope, as well as with timekeepers, and the instruments for rating them. A complete observatory was erected in the State-house Square, to which were assigned an equal altitude and a transit instrument, with a great zenith sector, the property of the proprietaries; to these, a powerful reflecting telescope, furnished with a micrometer, was added by the

funds granted by the legislature. Rittenhouse was left to prepare and furnish his observatory from his own resources. He had, in the autumn of 1768, commenced the construction of a proper building, which was finished in April, 1769. In this he placed a transit and an equal-altitude instrument, with a clock, all the work of his own hands. He was however without an instrument for determining his latitude ; this was finally obtained by the exertions of Provost Smith from the surveyor-general of New Jersey, (Lord Stirling,) in the form of an astronomical quadrant of two and a half feet. All that remained to be provided was a telescope of sufficient power, furnished with a micrometer. Two telescopes of less magnitude seem indeed to have been provided ; but the micrometer was indispensable to a complete set of observations. Provost Smith had, however, sought at an early period for the means of supplying this deficiency ; he had entered into correspondence on the subject with Mr. Penn, the proprietary, and with the British Astronomer Royal. In consequence of his representations, Mr. Penn purchased and sent out, for the use of the observatory at Norriton, an excellent reflecting telescope and micrometer.

The observatory at Norriton being thus at last completely provided, Rittenhouse applied himself with diligence to the necessary preparations. The

distance from Philadelphia was sufficient to make it inconvenient for his colleagues on the sub-committee to render him much assistance, and they seem to have considered it unnecessary to attempt to overcome this inconvenience. Confiding in the attention and skill of their associate, they left all the preliminary observations and calculations wholly to him. These were executed in a manner which fully justified their having intrusted the whole matter to their colleague, and, when the approach of the day of the transit called them to their posts, nothing was left for them to do, but to take their seats at the telescopes provided for them.

The labor imposed upon Rittenhouse became therefore more arduous, and the responsibility greater, than was originally intended by the Society, or than he would probably have ventured to assume. Great anxiety was also mingled with the exhaustion produced by continual labor, both by day and night; for it was within the limit of possibility, that, as on the former occasion (1761), clouds might interfere with the observation.

The morning of the expected day, however, broke without a cloud, and not even a floating wreath of vapor appeared to interfere with the observations. Exhilarated by the favorable state of the atmosphere, and stimulated by the near approach of the time when he was to reap the

fruit of his long and patient labors, excitement supplied the place of strength. But when the contact had been observed, and the planet had entered fairly upon the disk of the sun, his bodily strength was exhausted, and he sunk fainting to the ground, unable to bear the intense feelings of delight which attended the accomplishment of his wishes. He however speedily recovered, and proceeded to perform the measures of the distances between the centres of the two bodies, at proper intervals during the continuance of the transit.

When the record of the observations made at Norriton came to be collated, not only with those of the other members of the committee of the American Philosophical Society, but with those made in different parts of the world, the practical skill of Rittenhouse shone forth in the most brilliant light; and it would have been sufficient for his fame had he added no more than this record to the science of astronomy. But he was not content with having performed more than his full share of the observation, and executed the whole of the preparatory work. The planet had hardly completed its emergence, before he set himself down to the task of calculating the parallaxes. His calculation was among the earliest that were completed, and the results were forthwith communicated to Dr. Smith, who incorpo-

rated them in a paper of his own, which was laid before the Philosophical Society. This learned body did not hesitate in undertaking the costly duty of committing this paper, with some others on the same subject, to the press, and it thus happened, that the first correct determination of the solar parallax was derived from an American source. Before a transit of Venus could be observed for the purpose, astronomers had no mode of determining the dimensions of the solar system, except by the parallax of Mars. The exact determination of the parallax of this planet is far from being easy, and thus no writer before 1761 had ventured to assign to the sun a parallax of less than  $10''$ . The calculations of the American committee did not make this parallax more than  $8''.6$ . Some time elapsed before the record of the distant observations could reach Europe and be collated. When this was done, the calculations were made up, not by the observers themselves, but by Maskelyne in England, and Duséjour in France. The result of these calculations gave  $8''.88$  for the solar parallax. When however all the observations, with the exception of the American, are brought into the calculation, the mean derived from the whole has been found to be rather below  $8''.6$ , than greater; and thus the results of the American observations were not

only first calculated, but gave the most accurate determination.

This very accuracy of the American observations and calculations seems to have been at first injurious to their credit. Those who had long been accustomed to estimate the distance between the sun and earth at eighty millions of miles, were not prepared to have that distance suddenly increased to ninety-six millions. The highest determination which could possibly be drawn from the observations was for a time preferred as most likely to be accurate. It hence arose, that these records of the skill and science, which our countrymen exhibited more than sixty years since, are but little appreciated even among ourselves; while in Europe they are almost forgotten. Even the learned Delambre, in his account of the manner in which the dimensions of our system were determined, neglects to quote the papers of the American Philosophical Society, although he shows by a recalculation of all the other observations, that the true result is almost identical with that, which was set forth in those very papers. Of the honor to which the American Philosophical Society is justly entitled for its labors and exertions on this occasion, no small portion is due to Rittenhouse. His relative merits were fully appreciated in Europe, and he was named with the highest praise in the congratulations, which flowed in from

all directions upon the Society. To Franklin, who, from his official station in England, became the organ of these communications, it was declared by an accomplished judge, that no learned society in Europe could at the moment boast of a member possessing the various merits of Rittenhouse, who united, in his own person, tact as an observer, theoretic skill as a calculator, and practical talent as a constructor of instruments.

## CHAPTER IX.

*Transit of Mercury.—Longitudes of Philadelphia and Norriton.—Orrery resumed.—Comet of 1770.*

THE year 1769 was marked, not only by a transit of Venus over the sun's disk, but also by one of Mercury. The latter phenomenon is, however, of less interest than the former, as it is of more frequent occurrence, and could not be advantageously employed in determining the dimensions of the solar system, in consequence of the much greater distance between it and the earth. Rittenhouse observed this phenomenon also, and was assisted again by Messrs. Smith and Lukens, together with Mr. Orren Biddle, the gentleman who had observed the transit of Venus at Cape Henlopen.

This observation afforded data whence to calculate the difference of longitude between his observatory at Norriton, and the State-house Square at Philadelphia. This difference had indeed been deduced from the transit of Venus; but, as the parallaxes of the sun and planet must be assumed in the calculation of the longitude, and as the longitude again enters into the calculation

of the parallaxes, it was important that it should be obtained by an independent method. The observation having been made, the difference of longitude was deduced by Rittenhouse and his associates. The observations of the transit of Venus appeared to Maskelyne very important in their bearing upon a true knowledge of the dimensions of the solar system; and, as the longitudes of Norriton and the State-house Square were important elements of the calculation, that distinguished astronomer urged the members of the American Philosophical Society to ascertain the difference between these two places, not only by every practicable mode then employed in astronomy, but also in itinerary measure. The longitudes of both, from the observatory at Greenwich, would be of course ascertained in the employment of the first of these methods. These essential operations were in consequence undertaken, and performed by Provost Smith, Lukens, and Rittenhouse.

Since that period the instruments of astronomy have been vastly improved; new methods, more easy and accurate, founded on more complete tables, have been introduced; yet, for fifty years from the date of this operation, the longitude of no part of the American continent had been determined with an accuracy equal to that attained for these two places, by the operation we have referred to.

The labors preceding and attending the observation of the transit of Venus diverted Rittenhouse for a time from his mechanical pursuits. The orrery, projected in 1767, therefore remained unfinished upon his hands. No sooner, however, was this interesting subject completed, than he returned to his tools with increased zeal. Even before the orrery was finished, a contest commenced between the Colleges of Philadelphia and Princeton, to determine which should become the proprietor by purchase of this beautiful piece of mechanism. It would appear, that the former expected some favor would be shown it, either in price or in the terms of payment. Such favor, however, Rittenhouse, whose sole resources lay in his own labor, and who had already lost much time and expended much money in his attention to astronomic subjects, was not disposed to grant. It therefore became the property of the institution at Princeton, of whose cabinet it is still the pride.

We have already stated some of the important differences between this instrument and any other which bears the same name. These differences are pointed out by Rittenhouse himself in a communication to Barton, in which he imparts his original design.

"I did not," says he, "design a machine, which should give to the ignorant in astronomy a just view of the solar system; but would rather aston-

ish the skilful and curious examiner, by a most accurate correspondence between the situations and motions of our little representatives of the heavenly bodies, and the situations and motions of those bodies themselves. I would have my orrery really useful, by making it capable of informing us truly of the astronomic phenomena for any particular point of time; which I do not find that any orrery yet made can do."

The instrument, as constructed in entire conformity with these views, presents three vertical faces. That in front is four feet square. In the middle is a ball to represent the Sun, and around this others revolve to represent the planets. The latter move in elliptical orbits, having the former in their common focus, and at rates varying according to the law of Kepler. The orbits of the several planets are properly inclined; their nodes and the lines of their apsides are in just position, and have motions corresponding to those of the orbits of the planets themselves. The instrument being set in motion, three indices are caused to move, which point out, on graduated circles, the year, the month, and the day. The first of these extends to a period of five thousand years. In order to determine the heliocentric place of any one of the planets for any day within this period, the instrument is caused to revolve until this epoch is marked by the three indices; a small telescope

is then placed upon the body of the mimic Sun, and, being directed to the representative of the planet, the position of the latter may be read on a graduated circle representing the zodiac. This zodiac is not fixed, but has a motion corresponding with the precession of the equinoxes. The geocentric place is determined by affixing the same telescope to the earth, and is read off upon a circle, whose centre is the movable plane of the earth in the instrument.

The two lateral faces of the orrery have the same height with the principal one, and about half the breadth. Upon one of them are represented the motions of Jupiter and his satellites, and of Saturn, his ring, and satellites. On the other the phenomena of the Moon's motion are exhibited, her phases, the exact time and duration of her eclipses, the appearances of solar eclipses for any given position of the earth, the Moon's longitude and latitude, the motions of her apogee and nodes. In addition, it exhibits the apparent motion of the Sun in declination, and the equation of time.

Were it not that the instrument actually exists to attest that all this has been successfully executed, it might have been believed that such varied, numerous, and complicated motions were incapable of being represented by mechanism.

The calculation of the longitudes of Norriton

and Philadelphia was communicated to the American Philosophical Society in August, 1770, by Provost Smith. A few days earlier than the date of this communication, Rittenhouse laid before that association a series of observations on a comet, which was visible in June and July of that year. To the observations were appended calculations of the elements of its motion and of the figure of its orbit. In this paper he not only sustained the reputation he had acquired as a skilful observer, but showed himself capable of performing the most laborious and difficult computations of physical astronomy. The amount of labor, manual, bodily, and mental, which were thus crowded into less than three years of the life of Rittenhouse, was prodigious. Other men may have indeed accomplished as much and more, by directing their energies steadily to a single pursuit. But it is probable that there is no other instance on record of such a variety of occupation having been successfully executed by a single person within so small a space of time.

## CHAPTER X.

*His Second Orrery.—Proposed Removal to Philadelphia.—Loan-Office Bill.—Gift of the Legislature.—Change of Residence.—Election as Secretary of the American Philosophical Society.—Second Marriage.—Proposed Public Observatory.*

THE cession of the orrery to Princeton College caused, at first, no little dissatisfaction in Philadelphia. But this event, coupled with the praises that were daily pouring in from Europe, redounded in the end to the advantage of Rittenhouse, and exhibited to the inhabitants of Pennsylvania the high value of the talents and acquirements of their distinguished fellow-citizen. The loss of the orrery was found to be of little moment, so long as they could command the knowledge and manual dexterity by which it had been executed; and Rittenhouse at once tendered to supply it, by making for the College of Philadelphia an exact duplicate of the original instrument. Although he offered to do this at a price inconceivably cheap, the funds of that institution were not yet adequate to the purchase. In this emergency, Provost Smith undertook to furnish what

was necessary, by delivering a course of public lectures on astronomy, the profits of which were to be applied to the purpose. This undertaking was successful, the necessary funds were raised, and a duplicate of the orrery of Princeton was placed among the apparatus of the College of Philadelphia.

A just appreciation of the merits of Rittenhouse led the citizens of Philadelphia about this time (1770) to desire to withdraw him from his retirement at Norriton, and fix his residence among themselves. This could only be properly done by supplying him with means by which the difference in the cost of supporting his family, upon a well-stocked and fertile farm, and in a city, might be compensated. Simple in his habits, and economical in his expenditure, the products of his paternal estate sufficed in a great degree for his wants, and he was enabled to afford his beautiful timekeepers at prices which gave them an extensive sale. Had he been compelled to manufacture them in the more expensive position of Philadelphia, this might not have been the case. At this moment, however, an office presented itself, which demanded a residence at the seat of government, and, calling for high integrity and much intelligence, could be performed with little labor; the emoluments would be sufficient to justify Rittenhouse in changing his abode. This post was

that of one of the commissioners of the loan-office, a bill for the regulation of which was pending before the legislature of the province at their session of 1770. The commissioners were to be three in number; and, on the motion to place the name of Rittenhouse in one of the blanks left for the insertion of the names, the whole Assembly rose to vote in the affirmative. A point of etiquette was however in dispute between the Assembly and the Governor, in consequence of which it appeared probable that the bill would receive his veto. It was therefore permitted by the Assembly to sleep among their unfinished business. Yet the legislature, willing to compensate him for the disappointment which he might sustain, and anxious to testify their sense of his merits, voted him at their next session a free gift of £300 currency, and in addition appropriated £400 to defray the cost of a third orrery of double the dimensions of the two former ones. This gift, which is perhaps without either precedent or imitation in the legislative annals of the country, is glorious to the body which granted it, and honorable to the party which received it. It is expressed in the resolution to be "a testimony of the high sense which this House entertains of his mathematical genius and mechanical abilities."

Rittenhouse had, before the date of this vote,

namely, in the autumn of 1770, become a resident in the city of Philadelphia. This change of abode was speedily followed by a distressing event, the loss of his wife. The affliction consequent on this bereavement appears to have interfered for a time with the activity of his scientific and mechanical pursuits, and to have caused him to meditate an expedition to Europe, which he was advised by his friends to undertake as a means of relief. It is, nevertheless, happily ordained that time mitigates the most severe dispensations of this character, and the mind of Rittenhouse speedily resumed its tone.

In 1771, the American Philosophical Society, whose meetings his change of abode enabled him to attend regularly, elected him one of their secretaries. The palmy days of that association were however at an end; the disputes between the colonies and the mother country were rapidly approaching a crisis, and the minds of men were diverted from all pursuits, except those essential to subsistence, by the all-absorbing discussions of politics. From the time of the publication of the first volume of the Transactions of this Society, until the second was put to press, fifteen years elapsed, and an interval of ten years exists between the date of the latest communication of Rittenhouse in the former, and of his earliest in the latter. He did not however wholly neglect his

scientific studies, for in 1771 we find him to have been engaged with Kinnersley in experiments on the electric properties of the *gymnotus*; but the four years which succeeded his removal to Philadelphia seem to have engaged him in few other pursuits than the labors of his business, with the exception of some public tasks, a part of which have already been referred to. The completion even of these was prevented by the threatening aspect of public affairs, and they did not occupy much of his time. The only other duty, which was assigned him, was that of a commissioner for rendering the Schuylkill navigable, and this was also reduced to little importance by the state of public feeling.

During this interval, Rittenhouse recovered from affliction caused by the death of his first wife, and again married. The object of his second choice was Miss Hannah Jacobs of Philadelphia.

The year 1775 opened with a project intended to bring the abilities of Rittenhouse more effectually into the service of science. The Philosophical Society addressed the colonial legislature of Pennsylvania, praying it to establish a public observatory, and commit it to the care of Rittenhouse. Had the circumstances of the times permitted this project to be carried into effect, it would have enabled him to occupy a

great space in the history of astronomy. He had already shown himself the equal, in point of learning and skill as an observer, to any practical astronomer then living ; nothing was wanting to make him rank with the Flamsteads, the Halleys, and the Maskelynes, but that he should be permitted to devote his whole mind to this pursuit, and be furnished with those instruments and accommodations, for which no private fortune will suffice. Other men might have been found as well, nay, better qualified for the political pursuits and public offices in which it became his fate to spend the rest of his life ; but America has never yet produced any individual who has manifested so great a capacity for extending the domain of practical astronomy. To arrange the details of a disorganized and depreciating currency, to collect and disburse a scanty and ill-paid revenue, were thereafter to be the pursuits of our philosopher ; and he was to expend upon the estimates and returns of the tax-gatherer those powers of mind which were capable of grasping, and that mechanical skill which sufficed to imitate, the vast mechanism of the universe.

From the time at which Rittenhouse removed to Philadelphia, the minds of men had been undergoing a preparation for the parts they were to take in the ensuing contest. The inhabitants of the colonies had hitherto been remarkable for

their loyalty, and, in the earlier remonstrances they presented, had appealed to a paternal sovereign from the acts of a tyrannical legislature in which they were not represented. As the crisis approached, the unanimity with which such remonstrances had been made no longer continued. Some, finding that the acts of the Parliament were guided and directed by the pleasure of the monarch, unwillingly acquiesced in his sovereign will. Others, more bold, finding redress was not to be obtained by peaceable means, sought it in resistance. Among the latter was Rittenhouse, who, in defiance of the influence of beloved relatives, enrolled himself at an early date on what became the popular side. From this period to his death, his time was principally spent in a series of public duties, some of which had reference to his favorite scientific pursuits; but others, and those the most engrossing, were wholly repugnant. If he did occasionally revert to his original profession, and the studies in which he had acquired reputation, it was at distant intervals, and rather as the recreation of leisure from other pursuits, than as the absorbing occupation of his mind.

## CHAPTER XI

*His Election to the Legislature of Pennsylvania.*

—*First Committee of Public Safety.—Treasurer of the State.—Capture of Philadelphia, and Removal of the Treasury to Lancaster.—Second Committee of Public Safety.—Transit of Mercury and Solar Eclipses.*

THE residence of Rittenhouse in the city of Philadelphia, for four continuous years previous to the commencement of hostilities between the colonies and the mother country, had made him familiarly known to his townsmen. Although he did not take any active part in the public meetings and deliberative assemblies, by whose discussions the friends of the people were prepared for a resort to arms, his sentiments were not concealed; and the reputation he had acquired pointed him out as one to whom the conduct of public affairs might safely be committed in a moment of emergency. His known worth and ability speedily led to his being called to occupy a prominent position. It is a truth which all experience seems to confirm, that, if in time of profound peace the management of republics is apt to fall into the hands of such as seek office only for

their own private advantage ; in the hour of war and of danger, it is most usually intrusted to those who are most capable of directing the councils and leading the armies of the nation. Our own revolution is an obvious instance, which may be cited in support of this proposition.

Franklin had been elected a member of the Provincial Assembly of Pennsylvania for the year 1775. From this station he was speedily called to the General Congress. Rittenhouse was immediately chosen to fill the vacant seat. To be installed as the successor of such a man was no small proof of the confidence reposed in him. This confidence he justified by the useful, if not prominent part, which he took in the deliberations of the body of which he thus became a member, at this eventful and important period.

The ancient government being speedily dissolved by the commencement of hostilities, Rittenhouse was chosen a member of the convention called for the purpose of framing a constitution ; and when, by an ordinance of that convention, the provisional government was intrusted for a time to a Committee of Public Safety, composed of twenty-four members, Rittenhouse was included in that number. On the promulgation of the constitution, and the election of the officers and functionaries, who were to execute it, the powers of this committee ceased ; but the public duties

of Rittenhouse did not terminate with the expiration of this important trust. The constitution had provided for the appointment of a State treasurer by the vote of the lower House of the legislature, and he was unanimously elected to this responsible and laborious office on the 14th of January, 1776. The appointment was for no more than a single year; but Rittenhouse continued to be annually reëlected, until he declined any longer to hold the office.

Philadelphia, which had been threatened by the British forces from Jersey at the close of the year 1776, was made the object of a powerful expedition, which proceeded up the Chesapeake, in the summer of 1777. The utmost efforts of the forces of the confederation did not suffice for the protection of the city, and it fell into the hands of the enemy in the month of September. In anticipation of the possibility of this event, the public offices were removed in haste to the borough of Lancaster, at which place the legislature was speedily convened. This body, considering the emergency of the case, and the necessity of prompt and energetic measures, not only to resist the invading enemy, but to repress the disaffected, determined to constitute again a Committee of Public Safety, to which powers the most absolute and extraordinary were given. It was authorized to proceed summarily, and even to inflict

capital punishment upon all persons "inimical to the common cause of liberty and the United States of America." This committee was composed of twelve members, of whom Rittenhouse was one. It is to be recorded to the honor of this committee, that, during a time of the most highly exasperated feeling against those who were considered as Tories, no exercise of these extraordinary powers appears to have occurred, and that no individual, however obnoxious, appears to have sustained injury, either in person or property. The duties of Rittenhouse as a member of the Committee of Public Safety, and still more as presiding over a treasury of the most scanty resources, and liable to the most urgent demands, were arduous in the extreme. The pressure of these duties was aggravated by a separation from his family, and anxiety for their safety. On the approach of the enemy to Philadelphia, he had sent them to Norriton; the duties of removing the treasury from that city prevented him from joining them and making them the partners of his further flight. Even to visit them from Lancaster would have been attended with danger; for, although Norriton was without the British lines, it was not sufficiently distant to place it beyond the reach of flying parties of the enemy, and a member of the Committee of Public Safety would have been no mean prize. On the other hand,

a woman and children could not venture to traverse a country exposed to the partisans of both armies.

This painful separation continued for nine months, and the evacuation of Philadelphia was, in consequence, not less a subject of rejoicing to Rittenhouse as a patriot, than as a husband and a father.

During this period, too, he was exposed to anxiety from another cause. He had built his fame as a mechanic, and perhaps as an astronomer, upon his orrery. That at Princeton was reported to have been destroyed, and apprehensions seem to have been entertained, that the duplicate at Philadelphia might have suffered from the wantonness of a licentious soldiery. It was not until his return that this anxiety was removed. It was then found that the British commanders had respected this work of art, and had taken effectual measures for its safety. This liberal act redounds highly to the honor of Sir William Howe; and it is still more to his credit, that, after appreciating as he fully did the beauty and value of the instrument, the idea of treating it as a prize of war seems never to have occurred to him. Had he been governed by the principle, which has more recently directed the commanders of European armies, the orgeries of Princeton and Philadelphia might at this time have decorated the halls of Oxford and

Cambridge, for both were at different times at his disposal.

Although the anxieties of Rittenhouse in respect to his wife and children were of short duration, the war was not without painful influence upon his domestic relations. His brother-in-law, the Reverend Mr. Barton, whom we have seen as the early friend, and the assistant of the studies, of Rittenhouse, was naturally led to take an opposite side in the dissensions of the times. A native of Great Britain, and a clergyman of the established church, it is not to be wondered at, if he saw the cause of quarrel in a very different light from that in which it was viewed by his relative. Although neither his sacred profession nor his prudence permitted him to take any active part in the struggle, he felt a scruple of conscience, which prevented him from taking an oath of allegiance. He, in consequence, could not escape becoming obnoxious to the new government. It appears, that he was subjected to inconvenience, and perhaps put under restraint; at any rate it became necessary for him to leave Pennsylvania, and he was compelled to make interest for permission to retire to New York, then in the possession of the British forces. Painful as this separation must have been, it did not put an end to the personal friendship of the two relatives, who seem to have each appreciated the pureness of the other's mo-

tives. The children of Barton, who were of an age to form opinions of their own, did not partake of their father's political sentiments; their protection, therefore, devolved upon Rittenhouse. He was also the means of procuring for Barton various indulgences required by his position as an exile, from the Supreme Executive Council of the State; and these, with other good offices, were continued, until they were rendered unnecessary by the death of Barton, which took place in New York in 1780.

The astronomical pursuits of Rittenhouse were not wholly abandoned, even during this period of labor, anxiety, and danger. He found time to observe a second transit of Mercury, which took place on the 2d of November, 1776, and an eclipse of the sun, on the 7th of January, 1777. In the first of these, he was associated with his friends Smith and Lukens, and in the second with the former of these two gentlemen. On the 24th of June, 1778, the same three observers, with Mr. Orren Biddle, were engaged in the observation of an eclipse of the sun, and this within a week of the evacuation of Philadelphia by the British troops. In these observations, however, it appears by the record, that the laborious preliminaries were now performed by the other parties, and there is no trace of any calculation having been founded upon them. The relation of the

parties had in fact become the reverse of what it had been at the transit of Venus; thus showing how completely his other pursuits had diverted Rittenhouse from the cultivation of astronomy, although they had not been able to conquer his taste for that interesting science.

## CHAPTER XII.

*Boundary Lines of Pennsylvania and Virginia.*

— *Division Line of Pennsylvania and New York.—Demarkation of Territory reserved by Massachusetts within the State of New York.*

THE pressure of a public enemy, and the obvious necessity of union in opposing him, were not sufficient to prevent internal disputes in respect to territorial jurisdiction, and property in land derived from conflicting authorities. The very rejection of allegiance to a common sovereign, by removing any authority paramount to that of the State governments, seemed to aggravate the controversies; and it was even to be feared, that, in addition to acts of individual violence, States of the confederation might be arrayed against each other in open hostilities.

Among the disputes, which thus assumed a threatening aspect, was that between the States of Pennsylvania and Virginia. The line of Mason and Dixon had not been extended by them beyond the western limits of Maryland; and here another parallel became the chartered boundary in a direction from east to west, while the western

limit of the grant to Penn was a line parallel to the windings of the Delaware, and was even more vague than an unexplored parallel. A wide space of country was thus covered by two conflicting claims, and settlers, holding titles under both, had entered upon the disputed territory. It so happens that within this very space are included some of the most fertile lands in the Union; and thus the pioneers of cultivation, leaping at once over the wide extent of rugged cliffs and narrow valleys of the Appalachian group of mountains, had entered upon this inviting district at a comparatively early period. Those, who held titles from the proprietaries of Pennsylvania, seem to have been the first to attempt to subdue this part of the wilderness; but they were speedily followed by those, who claimed under the land warrants of Virginia. As no common jurisdiction was acknowledged by the two parties, ejectments were attempted, and possessions were maintained by force.

In order to bring these disputes to an amicable settlement, commissioners were mutually appointed by the two States in 1779. Rittenhouse was named first on the Pennsylvania commission, and with him were associated Professor Ewing and Mr. Bryan. On the part of Virginia were nominated the Reverend Dr. Madison and Professor Andrews. The commissioners, after a short session, agreed that the boundary between the two

States should thenceforth be, an extension of Mason and Dixon's line due west to the distance of five degrees of longitude from the river Delaware, and, from the termination of this line, a meridian drawn northward to the Ohio.

The uncertainty in which the determination of a degree of longitude is necessarily involved, particularly in the absence of any astronomical investigation, was however such, that great doubt existed, even after the conclusion of this convention, as to the place where the appointed limit existed; and thus, although the space was narrowed, the disputes and acts of aggression were not the less violent. Such was the warmth with which the contest was carried on, that a civil war was apprehended, and Congress conceived it necessary to interpose its paternal advice, in order to avert the calamity.

The joint commission was however still continued; and, it being understood that it was to proceed, with as little delay as possible, to determine the limits by astronomical observation, and to trace them upon the ground, the knowledge that strict and impartial justice would thus be finally obtained had an irresistible influence in averting the threatening evil. The discussion was not, however, finally adjusted until after the close of hostilities with Great Britain. Up to the final settlement, Rittenhouse was retained, by suc-

sive appointments, in his office of commissioner. In this capacity, he not only directed and partly executed the observations necessary to trace the parallel, to determine the difference of longitude, and mark out the meridian; but was compelled to enter into a variety of other questions. That the adjustment was at last made in an amicable manner, is in no small degree to be ascribed to his moderation, firmness, and acknowledged superiority in astronomical knowledge.

In this, and in all other subsequent operations of this sort in which Rittenhouse was engaged, either under the authority of his own State or that of others, he was constantly first named in the commissions, of which he in consequence became the chief. It was fortunate that the high public and political stations which he occupied entitled him at once to this preëminence, while his admitted excellence as an observer gave him on all occasions the undisputed direction of the methods calculated to produce the most authentic results. It is to this that we must ascribe, in no small degree, the ease and certainty with which many of our internal territorial disputes were settled, and the fact that no appeal has ever been made from the decisions of any commission of which he formed a part. A different policy has governed Great Britain and the United States in the adjustment of the boundary

between their respective territories; and thus it has happened, that points, which might have been settled by two intelligent astronomers in the course of a few hours, and lines whose actual delineation on the ground would have occupied but a few months, have been involved by the ingenuity of professional advocates in a mist of their own creation, and have from year to year appeared more and more remote from any satisfactory conclusion.

The settlement of the boundaries of Pennsylvania and Virginia was the most important of all the commissions on which Rittenhouse served. The line was completed in 1784. The other operations of the sort, in which he was engaged, were, the division line between the States of New York and Pennsylvania, defined by the forty-third parallel of latitude, in the astronomical determination of which he spent the summer of 1786; and the demarkation of a territory, the right of soil in which the State of Massachusetts had accepted, in lieu of a contested claim both to the land and the jurisdiction of a large part of the State of New York.

The last-mentioned duty was assigned him by the Congress of the confederation. This body had found it necessary to interfere in order to prevent the dangerous consequences, which at one time appeared likely to flow from the dispute.

The original grant from the crown of England,

under which the State of Massachusetts claimed, was limited only by the Pacific Ocean. The occupation of both banks of the Hudson river by a colony from Holland, and the conquest of this colony, had vested the settled parts of New York in the crown, by a right derived from conquest. At the close of the revolutionary war, the State of Massachusetts claimed, that this right could only be extended to the actual settlements, and that the whole of the territory west of them reverted to the holders of the prior grant. After much discussion, this State finally agreed to renounce all claim to the sovereignty, and to accept in lieu the property of a territory divided from the rest of the State of New York by a meridian line drawn northward from a point in the northern boundary of Pennsylvania, distant eighty-two miles from the Delaware river. Out of this, however, were to be left certain townships and other reservations.

The determinations necessary to set off this territory were made by Rittenhouse, and were the last operations of the kind in which he was engaged. They occupied him during a great part of the year 1787.

We have already adverted to the influence, which the fact, that many of the territorial divisions of the United States were geographical lines, capable of being determined by astronomical

methods, calling neither for legal discussion, nor admitting of a just resort to arms, had upon the early destinies of our confederated republic. We can now see the important bearing, which the possession of an astronomer, of such acknowledged talent as Rittenhouse, had in the pacific adjustment of these questions. This was the more important, as every commission, on which he served, began and terminated its labors before the confederation had derived strength from the adoption of a federal constitution, capable of enabling it to restrain those States, which might have thought it expedient to support their pretensions by arms.

## CHAPTER XIII.

*His Appointment as Trustee of the Loan-Office.*

—*Retirement from Office as State Treasurer.*  
—*Private Observatory.—Commissioner to  
organize a Bank of the United States.—  
Director of the Mint of the United States.*  
—*Resignation of that Office.*

DURING the performance of his duties as commissioner for running and determining astronomically the several boundary lines of which we have spoken, Rittenhouse continued to exercise the functions of treasurer of the State. In the year 1780, the office of trustee of the loan-office was also conferred upon him. To the former of these trusts he declined a reëlection in the year 1789, after having held it by unanimous annual elections for thirteen years. The causes, which he assigns in his letter of resignation, are ill health and the inadequacy of the emoluments to the labor and responsibility he incurred in the performance of the duties. During the time in which he held the office of treasurer, it was in truth one of difficulty and danger, and he was compelled to conduct it throughout in the face of a continually depreciating currency, which finally ceased to have any ex-

changeable value. During a part of the time, his emoluments, which were received in the form of a commission, did not admit of his employing a clerk, and he was indebted to the aid of his wife for the performance of such of his duties as required an amanuensis.

In addition to the duties of his office of treasurer, and his temporary appointments as commissioner of boundaries, he was placed by the legislature of Pennsylvania on several boards formed for the purpose of projecting internal improvements; and he received appointments of a similar character after he had left the treasury. The circumstances of the times were, however, little favorable to the execution of such contemplated works; and even the plans which became a matter of discussion were contracted, in consequence of the general poverty of the community. The time had not arrived when the gigantic mind of Clinton saw, in well-chosen plans of internal communication, the sure means of defraying their cost, and when the success of the New York canals demonstrated that a debt, incurred for such purposes, could never be more than a temporary burden.

His trust in the loan-office terminated in 1790 by a law, which merged that establishment in the general treasury of the State, from which he had retired, as we have stated, during the previous

year. He had, as has been mentioned before, been named in a bill introduced into the legislature of the province, at an early period of his life, for a similar trust ; but this bill did not then become a law, nor was a loan-office re-established until after the declaration of independence. The object of such offices was to supply the deficiency of a circulating medium, by granting loans to the owners of real estate, upon the security of their property, in paper money.

These bills of credit were not payable on demand, but redeemable by the payment of instalments upon the loans, and by the appropriation of the annual interest. Founded thus upon a security not readily accessible, it was a nice question, requiring the utmost skill and prudence to adjust, what amount might be safely thrown into circulation, without a risk of depreciation in the currency itself. Such depreciation did take place in many of the provinces ; and it is to the varying rate of this depreciation, that we are to ascribe the original difference in the value of currencies bearing the same denominations in all the different provinces. In after times a specie currency circulated along with the bills of credit ; and thus, while the paper might vary in value, no further change took place in the legal tender. The loan-office system not only required caution in the legislature to prevent its depreciation, but

a great degree of knowledge, firmness, and moderation in its trustees; as to them was committed the task of judging of the securities offered for the loans, of calling in the several instalments, and collecting the interest; while, on the other hand, they were required, in the exercise of sound discretion, to give extensions of time, when necessary to prevent the ruin of the mortgager, or the unnecessary sacrifice of his property.

Under the administration of Rittenhouse, the State of Pennsylvania issued a large amount of bills of credit, in addition to those already in circulation; but, such was the prudence with which the loans were made, and such the indulgent firmness with which the payments were enforced, that no loss accrued to the State, nor was there any failure in their regular redemption. In fact, when the loan-office system was put an end to by a clause in the constitution of the United States, that of Pennsylvania may probably be cited as that, which had been best administered, and had, without any loss to the holders, been productive of the greatest benefit to the community. This example, however favorable in its results, is not to be quoted as justifying a mode of creating a currency, which is so liable to abuse.

It appears as if Rittenhouse, in retiring from the office of treasurer, had determined to resume, with more regularity and attention than he had at any

period of his life been able to devote to it, the study of his favorite science of astronomy. For this purpose he had erected an observatory on the lot in Philadelphia, on which he also built a house for his own residence. Various circumstances and engagements, however, prevented his entering into any connected series of observations, nor was he ever able to carry his intention fully into effect. In truth, no sooner had he detached himself from the public business of the State of Pennsylvania, than he was called into the service of the general government.

Although he did not enter into such a regular course of observations as may be necessary to extend the bounds of science, he notwithstanding noted every phenomenon of interest which presented itself. Of these observations, some of the records have been published. These are, the transit of Mercury in 1789, two lunar eclipses in 1789 and 1790, and the two solar eclipses of the 8th of November, 1790, and the 3d of April, 1791. These observations are referred to by Lalande, in his great work on astronomy, and he quotes the private observatory of Rittenhouse, as the only one on the continent of America where any observations of value had been made.

The first appointment, which he held under the federal constitution, was that of commissioner for receiving subscriptions to the Bank of the United

States ; and, when the law establishing a national mint was passed, he had the high honor to be named by Washington as its first director. In this capacity he found himself engaged in a most arduous task. Not only were the machinery and other fixtures to be constructed, in a country where the little of mechanical skill which had once existed had expired under the pressure of a long and devastating war ; but the very persons, who were to be intrusted with the most important parts of the process, were to be formed under his auspices.

With such difficulties in his way, it is sufficient for the reputation of Rittenhouse to say, that the mint of his construction continued to be adequate, without any radical change, to all the wants of the country, until a very recent period. It would be unfair to institute a comparison between it and the establishments of the same description, which have been erected or remodelled within the present century. But, if we judge it in reference to the state of the art as it existed in 1792, the mint of the United States might rank before any other in the perfection of its workmanship, and the accuracy of its processes. The beautiful coinage which will perpetuate the name of the Emperor Napoleon as surely as his victories, and the splendid specimens of art which appeared when the bank of England resumed specie pay-

ments, had not yet been struck, nor had Bolton applied the engine of his partner to improve and facilitate the processes of the mint.

The duties thus imposed on Rittenhouse were performed with his accustomed industry and energy. Even after the organization was complete, and every part in full operation, he pursued all the processes, and superintended all the details with unremitting assiduity. So long as his health permitted, he was daily at his post, although personal attendance was no longer absolutely necessary; and, when prevented from paying his accustomed visit, he organized a system of written reports, by which every part of the work was fully exhibited to him.

Such close and unremitting attention were unfavorable to his health. The organic disease, which had been induced in his youth by excessive attention to his mechanical and scientific pursuits, but which had been resisted by a constitution, naturally vigorous and strengthened by agricultural labors, began at length to gain upon him. He in consequence resolved to retire from this laborious office, and resigned the direction of the mint in June, 1795, after having organized and brought it into successful operation.

It appears more than probable, that, considering the depressed state of the arts in the United States at this period, had not Rittenhouse pre-

sented himself, possessing the united talents of a skilful mechanic, and a learned natural philosopher, the nation must have been compelled to resort to Europe for a person qualified to erect and set in motion this important institution.

## CHAPTER XIV.

*He is elected President of the Democratic Society.  
— Declining Health. — Death. — Character.  
— Literary and Scientific Honors. — Conclusion.*

RITTENHOUSE lived long enough to witness the commencement of the long struggle, which divided the people of the United States into two opposing political parties. This contest began during the administration of Washington, and terminated only with the war against Great Britain. Of these two parties, the one was accused of cherishing aristocratic sentiments; the other claimed to be exclusively the friends of popular rights. It would be a needless revival of animosities, which have long since been buried, to examine into the truth of this accusation, or the justice of such an exclusive claim. Suffice it to say, that the latter of the two parties sought to increase its strength by the organization of associations under the name of *Democratic Societies*, throughout the Union.

Rittenhouse was too important a personage, both in character and station, to escape being involved in this discussion, at least in name. The Democratic Society of Philadelphia, as soon as it

was formed, elected him its president. In the embittered contest which followed, these societies were accused, by their opponents, of the design of subverting all government, and of desiring to imitate the worst excesses of the French Jacobins, thus retorting the accusation of an attempt to establish an aristocracy, and even of favoring a monarchy.

Rittenhouse did not escape being included in the accusation, with the additional charge of entering into opposition to an administration, under which he held a situation of trust and emolument. The best defence which has been made for him is limited to the statement, that his office of president was merely nominal ; that he rarely attended the meetings of the Society, and that the state of his health prevented him from being aware of its tendency. To do away such excuse, he has been charged with having permitted himself to be made the tool of designing politicians. At the present day, no such defence is necessary ; the principles, which the Democratic Society was formed to promulgate, have become the acknowledged rules of both the general and State governments ; and, if Rittenhouse be liable to any reproach, it may be couched in terms derived from his own trade ; his timepiece only went a little faster than those of his neighbors. So much of the accusation, as relates to his having arrayed himself in opposition to the

administration of Washington, is answered by the fact, that his resignation of office under it was accepted with extreme reluctance.

It is however due to historical truth to state, that Rittenhouse did not take any active part in the operations of this Society, although he often appeared before the public as their presiding officer. He in fact continued to decline in health from the time of his resignation of the office of director of the mint, which he survived little more than a year. Rittenhouse had not only been warned by his infirmities to retire from public life, but was aware of the gradual decay of his constitution. He was sensible of the close approach of death, and prepared to meet it with philosophic firmness and Christian resignation. Although he had never united himself to any of the various sects which abound in our country, his early education had imbued him with reverence for the Christian doctrine, and his subsequent studies had impressed on his mind a conviction of the existence of a Deity. Although accused by his enemies of infidelity, he was far from being such, and sought, on the approach of his mortal disease, the consolations of religion, while his mind retained all its wonted vigor. His death took place on the 26th of June, 1796, in the sixty-fifth year of his age.

The person of Rittenhouse is described as tall

and slender, his temper as placid and good humored, although capable of strong excitement. In the capacity of a husband and a father he was exemplary, and his social virtues insured him general esteem.

It is not necessary that we should state that he was industrious and energetic in the pursuit of his mechanical business, in his scientific studies, and in the execution of the various public trusts he was called to fulfil. The sketch we have given of the principal events of his life is a sufficient evidence of these points of his character.

His published works are principally contained in the "Transactions of the American Philosophical Society," in which they occupy a prominent part. They consist chiefly of the records and calculations of the astronomical observations which we have particularized, and of papers on other subjects in physical science. We have also an oration on astronomy, delivered by him before the same learned body in 1775, and several short pieces relating to subjects of temporary interest.

Although denied in youth the advantages of a collegiate education, his reputation earned for him honorary degrees, not only from the University of Pennsylvania, but from other literary institutions in the United States. Of the University of Pennsylvania he was long a useful and active trustee, and held for a time the appointment of

professor of astronomy. He was also chosen an honorary member of the only learned association, other than the American Philosophical Society, which had been formed in the United States previous to his decease. Of the American Philosophical Society, he was in succession an active and distinguished member, secretary, vice-president, and president. In the last office he succeeded Franklin, and was followed by Jefferson. More than one foreign society of the highest reputation solicited the honor of enrolling him as an associate ; and towards the close of his life he received the highest mark of distinction, which the scientific world at that time acknowledged, in being chosen a foreign member of the Royal Society of London.

In order that the value of this compliment may be fully appreciated, it may be necessary to explain, that, as the Royal Society derives no direct endowment from the government, it is principally supported by the pecuniary contributions of its fellows. Among them we therefore find not only names of distinction in science, and of those who take an active part in its transactions, but of those who are qualified only by birth, station, or fortune, united to a desire to promote the interests of learning. For the same reason, this Society does not refuse to enroll among its ordinary fellows, foreigners of fair scientific reputation, who, like

the subjects of Great Britain, are required to contribute to its funds. In this capacity, a considerable number of Americans have been chosen fellows. To be permitted to use this title, and have at the same time the privilege of increasing the funds by which the publications of the society are effected, is no small honor; as such, it is eagerly sought, and highly valued. But, when the Royal Society chooses to elect a foreign member, this choice imports, that it has sought to confer honor upon itself by placing on its list, without receiving any pecuniary equivalent, a name already distinguished, and likely to be celebrated in the history of science. Such was the reputation of the Royal Society at the time this honor was conferred upon Rittenhouse, that it was the proudest distinction which a man of science could attain, and would have been the fit reward of a life spent in the pursuit of physical learning.

We have thus traced the subject of our memoir from his birth in an obscure part of a newly reclaimed wilderness, under circumstances which denied him many of the usual advantages of education, until, by the force of industry, talents, and genius, he had reached the acme of scientific honor. Our task is therefore concluded, and will have been successfully performed, if it shall only recall to his countrymen the memory of a name, which engrossing pursuits of a very different character

from those in which its celebrity was acquired, have caused them in some measure to forget, or to regard with no due reverence; and if we shall have been able to assert for him the right of priority in scientific discoveries and researches, of which others have reaped the honors.

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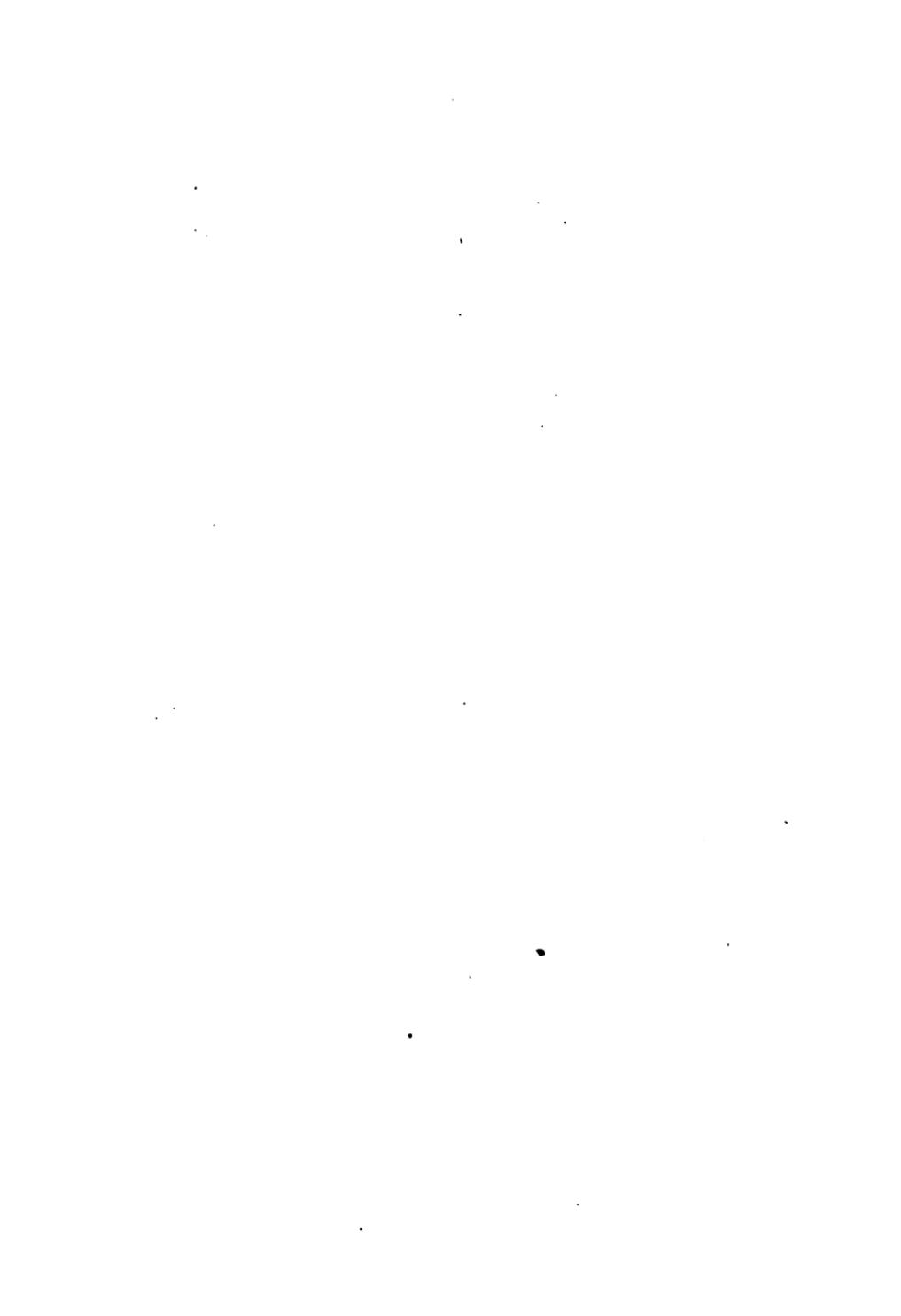
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